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The Canadian Practitioner and Review

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Original Communications.

THE SIGNIFICANCE OF SPIROCHETA PALLIDA IN SYPHILIS.

By JOHN GERALD FITZGERALD, M.B. (Tor.)
Sheppard and Enoch Pratt Hospital, Baltimore, Maryland.

Since Lustgarten, in 1885, announced the discovery of a bacillus which he declared was the specific etiological factor in syphilis, numerous organisms have been described as playing the principal *role,* but all, so far, have suffered the fate of the bacillus of Lustgarten, not one having proven to be the specific micro-organism. So it is with an unusual degree of scepticism that one turns his attention to a consideration of the animal parasite (so described by Hoffmann and Schaudin) which of late has occupied so large a space in the records of bacteriological investigations.

We need hardly comment on the multitudinous import of the discovery of the specific germ, because in every realm of medical science, whether it be medicine, surgery, neurology or psychiatry, the ravages of "syphilization" are only too apparent. But up to the present time nothing in the bacteriology of this scourge has been discovered which is of any positive value in furthering our knowledge of the origin, and as a consequence, the treatment of the condition. It is ardently hoped, therefore, that in the discovery of the spirocheta pallida there has at last been found an organism which will fulfil the requirements of Koch's triad.

Although Roux and Metchnikoff (1) announced in November, 1904, that they had successfully inoculated monkeys with syphilis, it was not until May, 1905, that Hoffmann and Schaudin, two eminent German investigators, the former an ex-army medical officer and privatdocent, the latter a member of the Imperial Council of Health, announced in the *Deutsche Medizinische Wochenschrift* (2) the discovery of the spirocheta pallida, which was found in the juice extracted from the inguinal glands and in glands which had been excised in an individual known to be infected with syphilis.

In their original article the deductions were drawn from a study of eight cases, in two of which the glands had been extirpated and smears made from them. In the other six cases the juice was drawn off from the gland and the organism isolated.

In all of these cases the initial lesion had only appeared from one to four months before the observations were made.

The spirochetæ were found to be of two varieties; to one the term " pallida " was applied, and to the other " refringens." By some it has been insisted that only the pallida is found in syphilitic lesions, and that the refringens is found in decomposing smegma; further, that this variety is saprophytic, and allied to the bacillus smegma. Hoffmann and Schaudin, however, noted that the refringens was also found in superficial syphilitic lesions, although it was not thought to have any specific function in the etiology of the disease process.

Many observers have corroborated the findings of Hoffmann and Schaudin, and have identified the spirocheta pallida in smears made from syphilitic lesions. Among the late reports is that of Fanoni (3), who describes in detail observations in a number of cases and tabulates his results.

It is interesting to note that the spirochetæ have also been found by Castellani (4) in Parangi (Yaws).

In the majority of instances where the observations are detailed the presence of the organism in primary and secondary lesions was noted, but it was not found in tertiary lesions except in two cases reported by Spitzer (5). This is extremely interesting, as has been pointed out by Sobernheim (6), because it agrees with what clinical experience has taught us regarding the transmission of syphilis in the three stages, namely, that it is usually found to be transmissible in the primary and secondary stages and not in the tertiary. Sobernheim examined 58 cases; in 50 either primary or secondary lesions were present, and in these spirochetæ could be demon-

strated; in the 8 cases of tertiary syphilis, the results were negative. In this article Hertheimer adds confirmatory evidence regarding the nature of the spirocheta, agreeing with Hoffmann and Schaudin that they are protozoa. It has been found to be present in congenital cases (Levatidi) (7).

So far the work done has been challenged by several German observers, two of whom assert that they have isolated the spirocheta pallida in non-specific infections of the external genitals (8).

Great difficulty has been encountered by all observers on account of the difficulty in staining. Various methods have been described and various stains used. Giemsa's (9) modification of the Romanowski stain for blood films was the one used by Hoffmann and Schaudin. The preparation of this stain and the technique of stain is as follows: Very thin smears from fresh syphilitic lesions are made on cover glasses fixed in absolute for ten minutes, thoroughly dried with blotting paper, and left for from sixteen to twenty-four hours in a mixture prepared as follows:

1. Twelve parts Giemsa's eosin solution (2.5 c.c. of 1 per cent. solution of eosin to 500 c.c. of water).
2. Three parts azur I. (solution 1 to 1,000 water).
3. Three parts azur II. (solution 0.8 to 1,000 water).

The preparation of this stain is described as follows in the *Medical Record,* November 25th, 1905: "Three grams of azur eosin and 8-10 of a gram of azur II. are exsiccated, finely pulverized and sifted and then dissolved in 250 grams of chemically pure glycerine at 60 degrees C."

After staining the smears are washed with distilled water, dried, and mounted in oil of cedar or Canada balsam. Objection has been taken to the use of both of these substances on account of their bleaching action, and it has been suggested that slides be examined directly without mounting them. (*Medical Record,* November 25th, 1905.)

The method of Sachs and Oppenheim (10), which stains the smears very quickly, only a few minutes being necessary for their preparation, is as follows: The (cover glasses) smears are dried in air and at once placed in a solution of 100 c.c of a 5 per cent. solution of carbolic acid in water and 10 c.c. of concentrated alcoholic solution of gentian violet; then dried by slowly and carefully heating over the flame of a Bunsen burner until it steams. Other methods which have been used are those of De. Marino (11), Dudgeon (*Lancet,* August, 1905), and Woods (*Medical News,* Vol. LXXXIII., p. 248).

The spirocheta pallida is long (4 to 10 microms) and thin, extremely mobile, very transparent; made up of many characteristic cork-screw spirals. It is extremely difficult to stain, and this is in great contrast to the spirocheta refringens, which stains comparatively readily, is more wavy, thicker, and of larger size. The spirochetæ can only be studied with the oil immersion, magnifying the field at least twelve hundred times, and artificial light is preferable. It is to be hoped that a determined effort will be made by everyone having specific cases under observation to determine whether or not the spirocheta pallida is present. This must be done in every case in order to prove Koch's first postulate, and when once it has been demonstrated it will lead up to the second, the isolation and cultivation of the organism on artificial media, and, finally, its inoculation into animals with the production of characteristic lesions. The greater part of the problem remains unproven; the etiological significance of the spirocheta is a matter absolutely in doubt, and until firm proof is forthcoming that all requirements are satisfied the question remains *sub judice*.

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OBJECTIVE NOISES IN THE EARS.

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The subject of tinnitus is one which has been discussed at great length in the text-books and in periodicals, but the discussion has been limited to subjective tinnitus aurium. There exists another form, the objective, to which little or no attention has been paid, probably on account of its rarity. It is nevertheless occasionally met with, and I find on a search in the text-books that St. John Roosa alone makes mention of it.

It consists of a fluttering, clicking or purring sound, more or less continuous, usually sudden in onset, distinctly audible to the observer, either to the unaided ear or with the aid of the diagnostic tube or the stethoscope placed over the affected ear. Roosa records a case in which the symptom was so distressing and persistent that the patient was driven to suicide to obtain relief.

It is supposed to be due to spasmodic action of the tensor tympani, but in the cases I have seen no movement of the drum-head was observable. I rather incline to the belief that it is due to fibrillary contraction of the muscular structures of the Eustachian tube. Both of the cases I have seen suffered from mild catarrh of the tube and middle ear.

In November, 1890, a child aged two years, was brought to my office on account of a purring noise observed by its parents. It enjoyed good health in other respects, and nothing abnormal had been observed until a month before. An examination of the drum-heads revealed nothing, but on putting my head close to the child's left ear a distinct purring sound was heard. The parents said that it was sometimes so loud as to be heard all over the room. I could not determine that the sound was synchronous with the pulse, but it gave the impression of a vascular bruit. There was no surface abnormality. I had the child under observation for a few days, but observed no change when I lost track of it. I have always thought that it was an arterio-venous aneurism, possibly between the carotid artery and jugular vein within the temporal bone.

On April 7th, 1897, Miss C. consulted me for clicking or fluttering sound in the right ear. It sounded very loud to her, and she was sure others could hear it. I was sceptical, but on placing the stethoscope over the ear I could hear an intermittent clicking sound. She had also a mild catarrh of the

middle ear, for which I treated her for some time with the Eustachian catheter, injecting a weak solution of camphor and menthol in alboline, and by Seigel's pneumatic speculum, aural massage. She made a good recovery, and the clicking ceased. I could never observe the least movement of the drum-head, even when the clicking was loudest.

A man, aged 50 years, came to me October 20th, 1905, complaining of slight deafness, a hissing tinnitus and, what annoyed him greatly, a clicking or fluttering sound. This latter I was able to hear when in direct contact, ear to ear, with his left ear. He had not heard anything of the kind with his right. He is still under observation and reports a considerable improvement. The treatment is by intratympanic injections and aural massage. I am not able to observe any movement of the drum-head, hence I have come to the conclusion that the movement is in the Eustachian tube.

A RESUME OF MY LAST TWO HUNDRED OBSTETRICAL CASES—COUNTRY PRACTICE.

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Statistics in regard to hospital results are easily obtained. There, methods are supposed to be ideal, and we have a right to expect that statistics would be ideal also. In country practice, on the contrary, we should expect but little, as the obstetrician has to take things as he finds them; has to work unaided in difficult instrumental cases; has to be "surgeon and midwife, too." In this *résumé* it is my object to show that the country cases do not fare so badly after all, far better than we who are in touch with the very varying conditions would expect. We will give statistics first, and touch on the more interesting cases afterwards:

I. Males, 110; females, 90.

II. Average length of time detained in patient's house, 4¾ hours.

III. Sepsis: Five cases, or 2½ per cent.; none fatal.

IV. Presentations:

O. L. A.	180, or 90	per cent.
O. L. P.	5, or 2½	"
O. D. A.	10, or 5	"
Breech	2, or 1	"
Shoulder	2, or 1	"

V. Perineal tears: 14 cases, or 7 per cent; of these eight were forceps cases, six were not.

VI. Dry births: Three cases.

VII. Twins: One pair, both boys.

VIII. Anesthetic used in about 180 cases.

IX. Instrumental cases: 37.

	Sex	Presentation	Reason for Forceps	Result to Child	Result to Mother
1–23	Male (13 cases) Female (10 cases)	.....	Uterine inertia	All living ...	All well.
24	Male	O. L. A. ..	Tetanic uterine contractions, due to overdose of ergot by midwife	O. K.	O. K.
25	Male	O. L. A.	Contracted pelvis	O. K.	O. K.
26	Male	O. L. P.	Occiput posterior	Dead	Profuse leucorrhea followed.
27	Male	O. L. P.	Occiput posterior	O. K.	O, K.
28	Male	O. L. A.	Contracted pelvis	O. K.	O. K.
29	Male	O. L. A.	Large child	O. K.	O. K.
30	Female	O. D. P.	Hydrocephalus	Dead	O. K.
31	Male	O. L. A.	Large child	O. K.	O. K.
32	Female	O. L. P.	Deformed pelvis.....	Dead	O. K.
33	Male	O. D. A.	Eclampsia	Dead	Dead.
34	Female	O. L. A.	Large child	O. K.	O. K.
35	Male	O. L. A.	13-lb. boy	O. K.	O. K.
36	Female ..	O. L. P.	Occiput posterior	O. K.	O, K.
37	Male	O. L. A.	Large child.....	O. K.	O. K.

X. Mortality: (*a*) Maternal, one case, eclampsia; (*b*) infant, six cases, or 3 per cent. These six cases are all infants not living two days after birth:

	Reason for Death.	Born.
1.	Occiput-posterior position and necessary manipulations.	Dead.
2.	Difficult forceps case—probably pressure	Lived one day.
3.	Hydrocephalus—perforation	Dead.
4.	Eight and a half months' infant—heart deficiency	Lived one day.
5.	Eclamptic convulsions of mother—induced labor.....	Dead.
6.	Contracted pelvis—craniotomy.....	Dead.

XI. Anomalies as regards mother: One patient had a double uterus. One uterus only was pregnant. After the expression of the placenta, the uterus felt as though terraced, and I introduced my hand, thinking that possibly all the uterine contents were not away. A double uterus was my diagnosis then, and subsequent examination confirmed this opinion. One uterus was in front of the other, not side by side. Another patient (forceps case 32) had an extreme pelvic deformity. The sacral promontory was very prominent, jutting out into and blocking the left half of the pelvis. The long forceps with axis traction hooks were of no use, and a

craniotomy with removal of skull in pieces was required. The body was delivered with the hand alone.

XII. Regarding children: One case of hydrocephalus (forceps case No. 30). Two children had gonorrheal ophthalmia, both recovering nicely. One case had congenital heart disease. About 60 per cent. had jaundice.

XIII. *Re* amniotic fluid: Three cases were true dry births. In one case with an otherwise uneventful confinement, the water broke on Tuesday morning, and pains came on the following Sunday night. In a number of cases six and eight hours elapsed between the escape of liquor amnii and the onset of pains. Three cases of hydramnios were met with.

Regarding technique, I may say that every means is taken to have cleanliness paramount. For the hands I use scrubbing with ordinary soap, followed by Parke-Davis' germicidal soap. In many of the manipulations I use sterilized towels, thus keeping my hands in fair shape and avoiding contamination of the patient. The binder I use for the first twenty-four hours only. No douches are given unless with a definite indication, such as offensive lochia or sepsis.

Of the five cases of sepsis, three I cannot explain. One case was either my fault or the nurse's, as we both came directly from a septic miscarriage case. The other case I saw in consultation, a difficult occiput-posterior position (No. 26). This patient I saw again three months after confinement. The uterus reached half way to the umbilicus, and a profuse leucorrheal discharge, of about a quart a day, poured from it. The cervix was very patulous. The patient recovered after the use of prolonged hot douches, intra-uterine, of sulphate of zinc solution. One case (No. 24) is worthy of special mention. A primipara in labor about six hours was not progressing rapidly enough to suit the midwife in attendance. She called on her druggist for aid, and he kindly furnished about an ounce and a half of ergot. This was given in teaspoon doses in the next few hours with no result. The first practitioner called found the woman in severe pain, and the cervix, though undilated, so tightly stretched over the presenting head that he attempted to apply forceps, but could not do so. I saw the patient after some hours, and on close questioning was told about the ergot. We gave chloroform freely, and somewhat relieved the almost tetanic uterine pains, and allowing the cervix to dilate a little. Convulsions came on, and we delivered after a rapid dilatation of the cervix and a high forceps operation. The mother's convulsions continued for a few

hours, but she eventually recovered nicely. In this connection I may say that a brother practitioner wrote me of a case he saw in which the attending physician gave ergot freely in the early stages of a labor, with the result that four doctors were called, and they decided on a Cesarean section. While they were away from the house preparing for the operation, the baby was born in the way Providence intended.

In five cases the sharp rigors occurred with no attendant fever, but in all these patients a nervous constitution was present, with extra worry or an extra number of visitors as a cause. Albuminuria prior to confinement was met with in a number of cases, but all did well on a restricted diet. The one case of eclampsia seen (No. 33) was not under observation; took the convulsions in the night, and died the following day. The urine then drawn gave only a trace of albumen and a specific gravity of 1008.

In regard to the use of forceps, it has been my custom to apply them in all cases where the patient is at a standstill with cervix dilated for two hours. The relatively small mortality to mother and child I would lay to the early use of forceps. The ordinary forceps operation is not a formidable one to physician or to patient, when she is under chloroform. Chloroform is used exclusively, as ether would be useless to the country obstetrician on account of its bulk, its slowness of action, and its inflammability. In the only two cases of post-partum hemorrhage I have met, no anesthetic was used in the one case because of a hemorrhagic history, and in the other case on account of an anemia present. In noting the number of perineal tears I may say that all of any degree were hunted for and repaired at once, special attention being given to the vaginal rupture. As many tears were due to non-instrumental as to instrumental cases; in fact, I believe that chloroform and forceps prevent rather than cause tears. In one case no healing occurred. Two cases of fissure of anus were cured by sphincter dilatation and caustic, respectively. Of cervical lacerations I have no note.

The results in country practice will be better as the public become better educated to surgical cleanliness. This education they can only acquire from the family physician, and for his own benefit he should teach it, preach it, and practice it.

AN IMPROVED SNARE FOR NOSE AND EAR.

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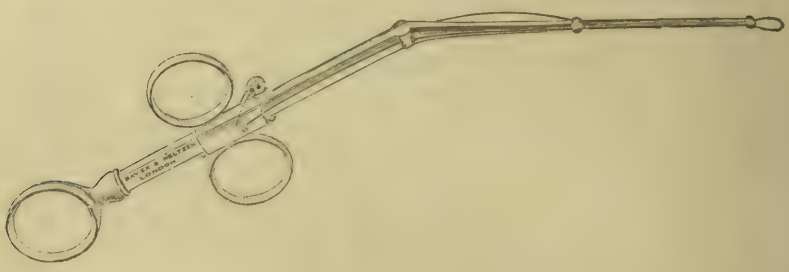
The accompanying illustration accurately represents a snare which I have had made. It possesses a great many advantages over others which I have used, and has performed its work so well that I wish to draw attention to it, and I think it will be appreciated. It is light, strong, and easily manipulated, very simple, with no mechanism to get out of order.



The snare, therefore, works noiselessly. The wire is exposed, the ordinary barrel being discarded, so that it is easily cleaned, and does not rust. It is quickly threaded and the loop is easily reformed. It may be made single by having the top ring left off. Two sizes are made, for nasal and aural polypi, respectively.

It is made by Messrs. Mayer and Meltzer, of 71 Great Portland Street, London, W.

Selected Article.

THE TREATMENT OF SLEEPLESSNESS AND PAIN.

By SIR LAUDER BRUNTON, M.D., F.R.S.,
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In treating insomnia, we have, then, first of all to consider the remedies which bear upon the circulation. Where the arteries are atheromatous we must restore their contractility, if possible, by means of iodide of potassium and of massage, and this method is sometimes very efficacious. Under it I have seen the carotids of an elderly lady, which previously appeared to be as hard and rigid as tobacco-pipe stems, become comparatively soft and elastic, whilst the patient regained, to a corresponding extent, the power to sleep which she had lost. Where the arterial tension is very high, as in cases of arterio-sclerosis or contracting kidney, the high-frequency current is sometimes useful by lowering the blood pressure.

We must remove sources of local irritation, relieve pain if it be present, warm the feet or other parts of the body by hot bags or bottles, if necessary, or else by friction. In cases where indigestion produces insomnia, we should give no food during four hours or more before sleeping time, or, if this is found to be disadvantageous, the food should be of the lightest description. Where flatulence and acidity prevent sleep, some bicarbonate of soda and peppermint is sometimes more efficacious than a sleeping-draught. Occasionally, when the whole body gets too hot and the circulation excited, merely getting out of bed and walking a few times round the room to get cool will allow the patient to obtain sleep. When the skin is uncomfortable from dryness, want of elasticity or the presence of waste products, a hot bath or hot sponging, followed by very gentle drying, will sometimes bring on sleep. Where the feet are persistently cold and not relieved even by a hot bag, putting them in cold water, rubbing them hard until they are red, then drying with a warm, soft towel, may relieve. The splanchnic area is able to contain a large quantity of blood, and one may sometimes, as it were, bleed into this area, and lessen the circulation in the brain by dilating the vessels of the intestine and stomach. This may be done by the external application of a hot bag to the abdomen, or, still better, by a wet compress, or by the introduction into the

stomach of a little bland, warm food, such as gruel or soup. When patients awake in the middle of the night and cannot get to sleep again, this food may be kept warm at their bedside during the night, so as to be ready at the proper moment, by placing it in a baby's food-warmer. If the food is too hot it tends to excite the heart, which is only divided from the stomach by the diaphragm, and the local heat passing through and stimulating the heart directly will raise the arterial pressure, and undo the good that might be otherwise obtained by dilating the vessels of the stomach.

Where the action of the heart is kept up by a high temperature, as in fevers, sponging the skin with hot water, dabbing it afterwards with a soft napkin and leaving the patient's body exposed under a cradle, with only one blanket over it, will lower the temperature and bring on sleep. In place of this, antipyretics, such as phenacetin, antipyrin, etc., will sometimes act as narcotics when more purely narcotic substances entirely fail. Chloral hydrate, by its depressing action upon the heart, combined with its sedative action on the nerve cells themselves, is a powerful hypnotic, either alone or combined with others, and where the tension is high may be more successful than others which act only upon the nerve cells.

We must now pass on from the circulation to consider the effect of drugs upon the nerve cells. Some of them appear to increase the power of the cells to put forth protoplasmic prolongations, while others lessen or abolish it.

Amongst those which increase the power of the cells to put forth protoplasmic prolongations, or perhaps to prevent their retraction, the most powerful appear to be certain substances nearly allied to uric acid, and belonging to the so-called xanthin group. These are the active principles of tea, coffee, cocoa, and Paraguay tea, etc. In many people tea or coffee tends to produce great wakefulness, so that they may either lie quiet in comparative comfort or toss about without any apparent reason, and in all such cases it is well for the patient to avoid taking tea or coffee for a good many hours before going to bed. Some people, indeed, are so sensitive that it is unsafe for them to take it later than breakfast time.

Perhaps in place of drugs I ought to say chemical substances, for lactic acid, which is a product of muscular waste, appears, according to Preyer, to have a considerable power to lessen cerebral activity and produce sleep without exerting any marked influence upon the circulation. The most abundant nitrogenous product of muscular waste is urea.

This, when pure, does not seem to act as a soporific, but some bodies allied to it in chemical composition are powerful and useful hypnotics. The first of those to be introduced was urethane, or perhaps I ought rather to say urethanes, which are compounds of various alcohols with urea. The one to which the name of urethane is given is a compound of ordinary ethyl-alcohol with urea. Another—hedonal—contains methyl and propyl-alcohols, while one lately introduced—veronal, which is diethyl-malonyl-urea—appears to be the most efficacious of this group hitherto introduced into practice, and in doses of 7 to 15 gr. it appears to produce refreshing sleep. It is quite possible that bodies belonging to this group are formed in the muscles or glands during their functional activity, and that they may play an important part in inducing natural sleep after muscular fatigue. As long ago as 1839, Dr. Percy showed that in all probability alcohol has a peculiar affinity for the cerebral substances, as a much larger proportion could be recovered from the brains of animals poisoned by it than from their other organs. In the compounds of which I have spoken it is not improbable that the alcohol may form a link which binds the urea to the nerve substance.

Alcohol itself is sometimes a powerful hypnotic, partly by drawing blood to the stomach, and partly by its sedative effect upon the nervous structures themselves. One of the first-fruits of the recognition of the relationship between chemical constitution and physiological action was the introduction of chloral by Liebreich. This body contains more oxygen than ordinary alcohol, and also contains chlorine. By its double action in enfeebling the heart, and thus lowering the blood pressure, while at the same time lessening the functional activity of the nerve cells, it is a powerful hypnotic. It has fallen of late years into comparative disuse, on account of the dread of its weakening the heart, but in cases of high tension, as in chronic Bright's disease, its power of lowering the blood pressure makes it very useful. Three other bodies in which sulphur is combined with alcoholic radicles, are sulphonal, trional, and tetronal. The tetronal seems to be the least useful, and trional now the most useful. They usually produce sleep without any bad effects, but I have seen the administration of a dose of sulphonal followed for a few hours by marked symptoms of disseminated sclerosis. The bromides appear not only to lessen the excitability of those nerve cells which bring the inner consciousness into relationship with the external world, but to depress nervous excitability generally. They are therefore

exceedingly useful in many cases, not only in aiding sleep, but in diminishing general irritability of various kinds, and in combination with other drugs, such as chloral, trional, and veronal, or with a more powerful narcotic, such as opium, they are most useful. Valerian is another substance which lessens excitability, and although its mode of action is practically unknown to us, its utility in the excitable conditions known as hysterical is unquestioned. It has no power to compel sleep, but sometimes, when given at night, by lessening nervous irritability, it may induce sleep. The more powerful narcotics, such as opium and its alkaloids, cannabis indica, hyoscyamus, and hyoscine, have a double action, namely, they tend to relieve pain as well as to induce sleep.

One of the great advantages of morphine and hyoscine is that they can be so readily administered subcutaneously, and thus they are rapidly absorbed, and their action is obtained quickly and certainly. We do not exactly know where the sensory centre for pain is situated in the brain, but we know that painful impressions are probably conveyed, to a great extent at least, by the grey matter, or perhaps by Gowers's tracts in the spinal cord, and usually originate in some severe stimulus being applied to peripheral nerves. Though it is the application of such stimulus that generally gives rise to pain, yet pain may be produced by irritation of nerve trunks, of the spinal cord itself, or of the cerebral centre, although there may be no peripheral cause. Thus, in so-called hysteria, pain has been felt in the joints so severe and so persistent as to lead to the limb being amputated, although the joint was perfectly healthy, and no cause for the pain could be assigned except a mental impression on the part of the patient to which the name of "hysterical" is applied. There can be no doubt that not only is there a great difference indeed between sensibility to pain in different individuals, but even in the same individual under different circumstances. A local injury which a man in health would scarcely heed or would indeed hardly feel may cause the same man, when broken down by illness, to feel the pain most acutely, and express his feelings in terms which those around him think exaggerated. In trying to relieve pain, we must, if possible, remove the cause; for if we simply try to deaden the sensation we may do serious harm to the individual. Pain is Nature's warning that something is going on which we ought to avoid. Therefore it is to a certain extent beneficial, but when the warning cannot be taken, when the pain continues, it is one of the greatest possible evils that

man can experience, and death itself will be gladly welcomed in order to avoid it. Strong acids and strong alkalies will both destroy the tissues and act as caustics, but the pain produced by the two is very different; that of the alkalies being heavy and dull, while that of the acids is sharp and stinging. In testing the reflex action of the frog, no one thinks of using dilute caustic potash as an irritant to the foot, but uses dilute acid. When the acid is washed off and neutralized the irritation ceases. This observation may be very useful to us in practice. One of the commonest causes of severe pain is toothache, and this is very frequently indeed due to the irritation of an exposed nerve by acid substances or acid secretions in the mouth. If these be neutralized, the pain ceases in a marvellous manner, and I have found the prescription of my friend, Sir Dyce Duckworth, exceedingly useful. It consists of a little bicarbonate of soda with laudanum, put on a pledget of cotton wool and introduced into the decayed tooth. Sometimes a general aching of all the teeth is caused by the action of acid saliva upon the teeth just where they emerge from the gums, and this may be relieved or cured by frequently washing the mouth out with a solution of bicarbonate of soda, or sucking tabloids of the same substance.

In a paper which I read before the British Medical Association three years ago, I mentioned that increased sensibility to pain may sometimes be due to lessened alkalinity of the blood, and that the administration of alkalies may thus tend to relieve it. The severe pain of gastric or duodenal ulcer may be relieved almost certainly by large doses of an alkali, but as these may tend to soften the tissues of the ulcer and increase the liability to hemorrhage, I usually give along with bicarbonate of soda a little chalk to act as an astringent to the tissues, and some carbonate of magnesia to counteract the constipating effect of the chalk. In renal pain, especially where a calculus is present in the pelvis of the kidney, and where the urine at the same time is excessively acid, I think we get relief of the same kind by lessening the acidity of the urine by alkaline bicarbonates, citrates, or tartrates. Pressure upon peripheral nerves, especially when their excitability is increased by inflammation, produces intense pain, and this may frequently be relieved by fomentations, poultices, or compresses, which soften the tissues and thus lessen pressure. These same applications to the abdomen relieve pain, though here their action is probably due, in part at least, to their

effect in producing more even and gentle peristaltic movement, with relaxation of spasm to the muscular fibres. In the pain of joints a similar relief may sometimes be experienced from their use, but when inflammation has taken place under some unyielding structure like a tense fascia or in bone, the application of heat, instead of relieving pain, tends to increase it, because the heat dilates the vessels of the part, which thus press more powerfully upon the nerve fibres and intensify the pain. In such cases icebags do more good than hot poultices, and in the case of a tooth where the pain is due to inflammation in the alveolus, cold to the cheek may relieve a good deal more than warmth, although warmth to other parts may ease the patient by drawing blood away from the tooth. A large number of drugs belonging to the aromatic group, have a powerful action, as analgesics, salicylate of soda, antipyrin, phenacetin, exalgin, phenalgin, etc.

We do not quite know the *modus operandi* of these drugs, but it would almost seem as if they diffused the painful impression in the spinal cord, so that it no longer reaches the sensorium. Where, however, the impression is so very extreme that it reaches the sensorium in spite of the action of these drugs, they may appear to intensify rather than relieve it. This is not very common, but I have seen cases in which it seemed to occur. Where the pain is due to irritation in the cord itself, these drugs appear to be more powerful than morphine or opium, but the most general of all analgesics are certainly opium and its alkaloids. They are frequently applied locally to painful parts before the fomentations, but it is questionable how far such fomentations are any better than those made of plain hot water. It is after absorption, and after it has reached the nerve centres, that opium or its alkaloid, morphine, acts. In most cases all the benefits which opium can confer may be obtained by the use of morphine, and this has the great advantage, as already mentioned, that it may be given subcutaneously, and its rapid action thus ensured, but apparently this is not always the case, and sometimes opium suits better than morphine.

I have found that a most useful way of giving opium consists in mixing 1-2 drachm to 1 drachm of tincture of opium or liquid extract of opium with enough water to bring it up to 2 fluid drachms, and inject it into the empty rectum by a glycerine syringe. In half an hour to three-quarters the opium is usually absorbed, and I think relieves pain almost more efficiently and for a longer time than a subcutaneous injection

of morphine will do. This method of administration has the advantage over that of the stomach, that the opium comes in contact at once with mucous membranes, and is not diluted by other substances, whereas in the stomach there may be a large quantity of food, which interferes with absorption. Some of the most severe pains in the body are due to combined spasm and distension of hollow muscular organs—for example, of the stomach and intestines by flatulence, of the bladder by urine, of the biliary ducts or ureters by calculi, of the heart and aorta by high arterial pressure in angina pectoris, and in simple headache to spasm of the vessels. In all these cases, if the pain be very intense, opium or morphine may be required for its relief, and sometimes—as, for example, in biliary colic—I have seen pain so intense as to resist the action of morphine injected subcutaneously in large doses. In such cases, a plan suggested by the late Mr. Morant Baker is sometimes most useful. A few whiffs of chloroform are given, just enough to put the patient under. The chloroform anesthesia passes into the opium narcosis, and the patient will sleep for hours unconscious of pain. In the case of angina pectoris, the lowering of the tension by vascular dilators, such as nitrate of amyl, nitro-glycerine, or nitro-erythrol, generally relieve the pain at the time, and its recurrence may be to a great extent lessened by reducing the tension generally through a diet containing but little nitrogen, and by the continuous use of nitro-erythrol or other vascular dilators. One of the newest of those which seems to promise much is the hippurates of soda or of ammonia introduced by Dr. George Oliver. The pain of headache is, I feel sure, from very many observations in my own person, due to what one might term a colic of the arteries in the head, there being peripheral contraction and central dilatation. The quickest way of relieving this is usually by the use of such substances as antipyrin or phenacetin, and their action is rendered more efficacious by the combination of those drugs with small quantities of citrate of caffein. I have found that headaches can usually be not only arrested, but prevented, by a more or less continuous use of bromide of potassium and salicylate of soda, combined with some aromatic spirit of ammonia to avoid depression. There are some headaches where these remedies are of little use, that is, the nocturnal headaches associated with specific disease, and in them large doses of iodide of potassium are most useful. Occasionally, this drug renders most signal service, even when no history of specific disease can be obtained, and in cases where there is

much tenderness of the scalp, benzoate of soda, which is nearly allied in its chemical constitution to salicylate, may relieve the pain while the salicylate is powerless.

I had intended to say more about the use of electricity and massage in the treatment of sleeplessness and pain, but I have already somewhat exceeded the limits allowed me, and would only remark in conclusion that, comparing our present means of ensuring sleep and relieving pain with what they were thirty or forty years ago, we have great cause for congratulation and great hope for the future.—*Brit. Med. Jour.*

Progress of Medical Science.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Intramuscular Injections of Mercury in the Treatment of Syphilis.

An experience involving the treatment by a particular method of over three thousand cases of syphilis should enable Lieutenant-Colonel F. J. Lambkin, R.A.M.C., to speak with undoubted authority. In the *British Medical Journal,* Nov. 11th, 1905, page 1254, there appears a most interesting paper written by him on the subject of treatment of syphilis by intramuscular injections of mercury, and embracing an epitome of 3,230 cases so treated, the vast majority of them having been met with in army practice.

An immense improvement in the results of such treatment is indicated, as compared with those obtained by the ordinary methods, such as internal administration and inunction, formerly so largely employed, and one is inclined to believe that the method is one that might be extended with decided advantage to ordinary hospital practice, and to private practice as well.

The results of any form of treatment which is relegated for its carrying out to the patient himself must necessarily fall short of one's expectations, and there are few of us who have not realized, with the patient, the irksomeness of abiding by the law of treatment by such methods.

The difficulties in this respect are, to a large extent, overcome by the method of intramuscular injection, by which the mercury is injected into the muscular tissues of the patient, preferably in the gluteal region. The method is advantageous inasmuch as its initial action is rapid; if properly carried out it is unattended by danger, and its effects are so prolonged that the irksomeness of treatment is largely relieved.

Of the many various mercurials that have been so employed, the writer has a decided preference for the metal itself, suspended with lanoline and liquid, carbolized paraffin in the form of a cream, claiming that, unlike the other forms, its use is practically painless, and its frequency of administration need not exceed once a week. The cream employed contains

one grain of metallic mercury in ten minims, which amount is injected "once a week until all active signs of the disease have subsided. The time this will take averages from six weeks to two months, then the number of injections is reduced to once a fortnight for three months. A rest from all mercurial treatment is then given for two months, and again a three months' course of fortnightly injections is given, followed by a two months' repose from treatment. Thus the patient is brought to the end of his first year's treatment. He is not then told that he is cured, but is kept under strict observation; and should he show any signs of relapse, further courses of three months' treatment, followed by the same amount of rest, are given. The patient ought not to be lost sight of until he has been at least twelve months clear of all symptoms after the last course of injections. The average period of treatment and repose necessary is about two years."

From this it will be seen that altogether during the first year's treatment scarcely more than twenty such injections will have been given, and it may be that the necessary treatment will end there.

In the treatment of his series of cases the writer has employed about sixty thousand intramuscular injections, and of these about fifty thousand have contained the metallic mercury. In this vast experience he has never encountered any of the alleged dangers, such as local abscess, mercurial stasis, salivation, or embolus.

While such treatment is undergone due attention is given to baths, feeding, manner of living, the care of the teeth and gums, and other necessary adjuncts.

In addition to many other interesting phases of the subject, the paper contains a concise description of the preparation of the material for injection, its preservation, and the method of its administration. F. W. M.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. McILWRAITH, FRED. FENTON AND HELEN MacMURCHY.

Pernicious Vomiting of Pregnancy.

In *Surgery, Gynecology and Obstetrics,* July, 1905, we find a paper on "Pernicious Vomiting of Pregnancy," by Whitridge Williams. He divides the cases of serious vomiting into three groups, according to causation:

1. *Reflex.*—Vomiting started by anomalies in the generative tract: (*a*) Uterine displacements, particularly retroflexions; (*b*) ovarian tumors; (*c*) certain cases of endometritis; (*d*) abnormalities of the ovum, such as hydatid mole, hydramnios, and certain cases of twin pregnancy.

2. *Neurotic.*—(Diagnosed, apparently, when no other cause can be found.)

3. *Toxemic.*—Under this head comes the most interesting of the author's observations, the association, namely, of acute yellow atrophy of the liver with vomiting of pregnancy in women in whom the ammonia coefficient in the urine is abnormally high. When the ammonia coefficient remains normal, on the other hand, Williams finds that the vomiting is due to reflex or neurotic causes. His conclusion, therefore, is: With high ammonia coefficient induce abortion; with normal coefficient seek cure by treating other causes. The author distinguishes, further, between a toxemia, the manifestations of which are vomiting of pregnancy and ultimately acute yellow atrophy, and another in which eclampsia occurs. The points in the diagnosis of the two conditions are as follows:

Toxemia—Acute Yellow Atrophy, Vomiting of Pregnancy.	*Toxemia—Eclampsia and Pre-eclamptic Toxemia.*
(1) Necrotic lesions in the liver commencing at the centre of the lobule, spreading peripherally and not involving the portal spaces.	Necrotic lesions in the liver beginning in the portal spaces and invading the lobule towards the centre.
(2) Urinary output diminished only as intake of fluids is interfered with, albumin and casts present only in the last days or hours, edema absent.	Marked signs of involvement of kidneys and general circulation, as manifested by scanty urine in proportion to intake of fluid; early appearance of pronounced albuminuria, casts and edema.
(3) Total nitrogen practically normal, ammonia coefficient wonderfully elevated.	Total amount of nitrogen greatly diminished, ammonia coefficient practically normal.

The author's abstract for the May meeting of the American Gynecological Society is alone given. The matter is more

fully dealt with in the *Johns Hopkins Hospital Bulletin*. All advance in knowledge is by this process of differentiation. We hope, therefore, that further observations may confirm Williams' findings, and more light be shed on the dark subject of the toxemia of pregnancy. K. C. M.

Post-partum Repair of the Cervix.

There is still some difference of opinion on this subject. Some years ago Dr. R. L. Dickinson advocated and practiced immediate repair of the cervix. He now says of this practice: "I found that in a large number of cases it was impossible on that frayed and crushed and swollen and ecchymotic surface to determine just what was torn structure and what was simply abraded surface, so I abandoned that general practice. When an extensive injury happens, and there is no reason for immediate repair, it is my present practice to delay repair until partial involution of the cervix has occurred. . . . The coaption is as easy as Dr. Polak pictures it at the end of labor, but the recognition of exact anatomical adjustment is impossible at that time. Our results are good, but they are better later."

Again, Dr. C. Jewett, in discussing a paper by Dr. A. M. Judd, says in part: "Pelvic floor injuries are best repaired immediately as a rule. When the patient is in bad condition, the attendants exhausted, or the laceration complicated, the work may be postponed till a day or two later. Union is obtained by suturing at any time within a week or more, before granulation is too far advanced. . . . Satisfactory suture of the cervical wounds directly after labor, when they require suture at all, is difficult and, except when demanded for hemostasis, unwise. The most serious objection to immediate suture is the danger of infection, and this danger is not much lessened by waiting a few days. . . . Suture of the cervix during any period of early involution, I have learned to my sorrow, is not entirely safe." Later in the discussion Dr. Jewett mentioned the case of a woman who developed phlegmasia after he had repaired the cervix on the third day."

Dr. J. O. Polak had had two cases of phlegmasia, one resulting fatally, after repair of the cervix on the eighth day. The puerperium had been absolutely normal up to the time of the operation. The phlebitis developed two days subsequent to it.

Such results as these occurring in the practice of such men should, we think, render us unwilling to undertake cervical repair during the puerperium, unless such repair is

strongly indicated. The discussion of this question at the Brooklyn Gynecological Society may be found in the *Brooklyn Medical Journal* for March and for May, 1905. K. C. M.

Occipito-posterior Labors.

We have recently been looking over some back numbers of the *American Journal of Obstetrics,* and find in the number for June, 1904, an interesting article by Dr. Hammond, of Butte, Montana. The doctor is reporting clinical observations on 975 cases of labor, and says, amongst other things: "Of all complications and anomalies in obstetric practice none will occasion the practitioner, particularly if he be inexperienced, so much anxiety and loss of sleep, so much trouble and perplexity, so many conditions of puerperal morbidity, and in the end so much loss of confidence on the part of his patrons, and so much dissatisfaction with the results of his work, as occipito-posterior positions of the vertex. The labors will begin and continue for hours with teasing, ineffectual pains, slight dilatation and just progress enough to keep the attendant anxious and watching hour after hour for some decided advancement. Naturally the inexperienced patient (for a very large majority of these cases happen in primiparous women) grows very nervous, concludes her doctor fails to understand her case, thinks he doesn't know how to manage the labor, becomes hysterical and exhausted. The friends and relatives begin to share this lack of confidence in the doctor, as hour after hour passes without any satisfactory progress. The doctor feels the situation keenly enough to make him wonder why, if he would become a physician, he did not take up the eye and ear as a specialty. When labor presents initial symptoms like these, if the attendant is sure of a vertex presentation, he can almost always be equally sure of an occiput posterior, either right or left, to deal with."

This is a vivid and accurate presentation of the case. We regret to find, however, that the doctor has not noticed the very frequent association of dry labor with these cases; also that his favorite treatment is podalic version. Manual dilatation, rotation by the hand on the shoulder in the uterus, and extraction with forceps, gives much better results.

K. C. M.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN, M.B., M.D., C.M.

Treatment of Ophthalmia Neonatorum.

Before the Michigan State Medical Society, Eugene Smith read a valuable paper on the above subject. In some respects he opposes the general practice; for instance, he considers cold applications to the lids of the infant not only dangerous, but unnecessary. He also strongly opposes the frequent washing out of the conjunctival sac, not only because the parts need rest, but because of the danger of injuring the cornea. How, then, is the discharge to be removed? He answers:

"Who, in treating cases of this kind, when the lids have been separated, has not seen the discharge to the extent of possibly a half teaspoonful or more flow out on to the cheek, due to retention from the sticking together of the lids? Not only is softening of the epithelial layer of the cornea favored by the retention of the secretion, but the pressure due thereto is also baneful and endangers the circulation of the cornea.

"Prevention, then, of sticking together of the lids is one of the main, yes, one of the most important parts of the treatment. It is simple and easily carried out by the nurse or mother. Simply besmearing the whole external surface of the lids, including the edges, freely with any bland aseptic or mildly antiseptic ointment, and keeping them well covered with it constantly is the point. The discharge will then flow out on to the cheek and can be gently removed by rubbing with a bit of gauze, and more ointment applied immediately.

"The usual daily application of silver nitrate, one to two per cent. solution, or, what is perhaps most frequently used nowadays, a fifty per cent. solution of Argyrol, two or three times a day, to the everted lids, or freely dropped into the conjunctival sac, will fill the bill.

"If haziness of the cornea or ulceration has occurred, a one-half per cent. solution of atropine sulphate may be used in conjunction with the above treatment."

In an article on "What the General Practitioner Should Know about the Specialties," L. W. Snow (*Northwestern Lancet*) enumerates ophthalmia neonatorum, eye-strain, glaucoma, iritis, foreign body in the cornea, suppuration of middle ear, examination of the ear, etc. On some of these he remarks:

"The general practitioner should bear in mind the influence of eye-strain on the general system, and be prepared to make simple tests of distant and near vision.

"*Glaucoma.*—The general practitioner should be familiar

with the usual symptoms of glaucoma, and be able to diagnose a typical case of this disease. There may be subacute or chronic cases, or acute cases complicated with some other disease, in which the diagnosis is difficult to make, but if he remembers the dilated pupil, the rainbow colors seen by the patient, the anesthesia of the cornea and the increased tension, he will at least be on his guard for this dreadful affliction. Overlooking the cardinal symptoms of this disease may doom the patient to perpetual blindness.

"*Iritis.*—The general practitioner should be able to diagnose a typical case of iritis, or at least be on his guard for this disease. He should also be somewhat familiar with the treatment of a case of this kind.

"The general practitioner should have a general idea of the diagnosis and treatment of foreign bodies in the cornea and conjunctiva; also of penetrating wounds of the eyeball, bearing in mind the danger of sympathetic ophthalmia.

"In infants a suppuration of the middle ear before a rupture occurs may very easily be overlooked. If, however, the physician is on his guard some obscure brain symptoms may, in some cases at least, be cleared up by an examination of the ear, and operative measures, if necessary, may be employed in time to prevent a fatal termination of the case.

"The general practitioner should be able to examine the ear with the aid of reflected light; to detect ordinary foreign bodies, cerumen, and polypoid growths, and to diagnose suppuration of the middle ear. He should understand enough of the anatomy of the ear to cause him to use extreme caution in the removal of foreign bodies from the same."

Disturbances of Hearing During Fever.

L. Rugani (*Archiv. Ital. di Otolgie*). This work speaks of the disturbances of hearing caused by fever process, but regardless of the disease which causes the fever, excluding deep-seated middle-ear conditions and with normal tympanic membrane. Consideration was first given to patients with 100.4 deg. to 103.1 deg. F. and with normal sensorium. The affections were in part severe, ileotyphus, coli bacillus. Puerperal infection, lung tuberculosis and articular rheumatism; partly mild as in bronchial catarrh, angina and gingivitis. In the cases examined the fever had existed in some for a long time, others for a short time, and in some cases simply a passing attack. The examinations of the hearing were usually made during the fever attack, sometimes during convalescence or after.

LARYNGOLOGY AND RHINOLOGY

IN CHARGE OF J. PRICE-BROWN

A New Surgical Treatment for Stubborn Cases of Ozena. By JULES BROEKAERT (*La Presse Oto-Laryngologique*, July, 1905).

After treating nearly a hundred cases of atrophic rhinitis by paraffin injections, all of which had been more or less benefited by the operations, the writer considers this to be by far the best method of treatment. He admits failures, however, in certain cases. In some injections were impossible, owing to loss of elasticity or extreme friability in the mucous membrane. In others, although the turbinals were filled with paraffin, the fetor and purulent discharge continued, the sinuses, particularly the ethmoid and sphenoid, being secondarily affected. For these he recommends radical operations upon the diseased sinuses of an extensive character, in addition to the paraffin injections. His experience of the radical treatment has so far been very limited, and the results are not yet published.

Adenopathies in Affections of the Nasal Fossae. By GELLÉ (*Rev. Hebd.*, May, 1905).

This is reported as a very important paper. It describes the anatomical relationships of the lymphatics of the nasal mucous membrane, pointing out the sharp line of demarcation between those of the olfactory region and those of the respiratory region; and, above all, the close relationship which exists between the olfactory lymphatics and the meninges. The importance of examining the nose with the utmost care in all cases in which there is enlargement of the lymphatic glands of the neck is insisted upon. The comparative immunity of the glands of the neck in malignant disease of the nose is also noted. A point in reference to syphilis is likewise worth remembering. In cases of primary chancre of the nose the lymphatic glands are invariably affected; whereas they often remain undisturbed, when the nasal lesion is secondary or tertiary.

Radium in Nose, Throat and Ear. By C. J. BECK (*The Lancet-Clinic*, June, 1903).

This is the history of eleven cases of disease of these various organs, treated by the application of radium. The preparation used was a capsule of fifty milligrammes of radium of 10,000 radio-activity. The tube in each case was applied to the part

affected, and kept in position from five to thirty minutes, the treatment being repeated for periods varying from one week to several months. Three were cases of tuberculosis, one of the nasal septum, one of the larynx, and one of the middle ear. In none of these was there marked improvement.

In a case of syphilis of the nose, in which prolonged constitutional treatment had little effect, marked improvement followed the substitution of radium treatment.

In one of sarcoma of the nose, pain was relieved, but there was no check to the progress of the malignant growth.

In another of carcinoma, pain was also relieved, but as in the sarcomatous case, the disease continued rapidly in its course toward a fatal issue.

In a patient affected with lingua nigra, cure from the use of radium was effected in a comparatively short space of time. In a case of persistent nasal pain, relief became permanent from its use, while in one of sycosis of the vestibule it had to be abandoned.

In the remaining two cases, one of arthritis deformans with tinnitus and chronic otitis media, no benefit accrued; neither did it in the other of suppurativa chronica.

On the whole the practical results from the use of radium were not very encouraging.

Formalin in the Treatment of Diseases of the Ear, Nose and Throat. By OTTO J. STEIN (*Laryngoscope*, November, 1905).

This is the experience of the writer in the use of the drug in detailed cases of oto-mycosis, chronic suppurative otitis media, and laryngeal tuberculosis. He claims that, as a means to prevent the development of bacteria of putrefaction, and to prevent the growth of various parasitic bodies found within the auditory canal, it has no equal; while in laryngeal tuberculosis it is one of the best applicants that can be made.

The fact that it is a powerful germicide, disinfectant, deodorant and antizymotic, and that infinitesimal dilutions have strong germicidal power, places this drug amongst the most valuable of its class.

For directly local applications, the solutions are used of a strength varying from 2 1-2 to 10 per cent., solutions of cocaine being previously applied to lessen the immediate irritation produced temporarily by the formalin.

For sprays and as washes, the solutions are much weaker, ranging from 1-2 to 1 per cent. For vasomotor rhinitis,

Ballenger is quoted as using a combined spray of cocaine 2 per cent., with formalin 1-2 per cent., thus making a single application.

Angioma of the Palate. By LAMBERT LACK (*Journal of Laryngology*, 1904).

This case was shown on account of its rarity. It occurred in a woman aged 21 years. For a year a red, discolored patch had been growing on the soft palate, gradually increasing in size, and latterly bleeding upon the slightest touch.

On examination a swelling the size of an English shilling was seen on the left side of the soft palate, extending outwards almost to the cheek and upwards to the hard palate. It was soft and slightly raised, the surface being covered with dilated venules which bled readily when touched. The lower edge was slightly harder, and inclined to be papillary.

Although considered to be a case of angioma, it might possibly be of a sarcomatous character, and complete excision was advised.

The Etiology and Treatment of Mycosis Occurring in the Upper Respiratory Tract. By SENDZIAK, of Warsaw (*Journal of Laryngology*, November, 1905).

This is probably the most exhaustive and scientific paper ever written upon the subject. It is a prize essay, the writer being awarded the amount of one hundred dollars, offered by Dr. H. Holbrook Curtis, of New York, to the members of the American Laryngological, Rhinological and Otological Society for the best article upon mycosis. It was competed for during the year 1905.

Malignant Disease of the Tongue. By MAYO COLLIER (*Journal of Laryngology*, August, 1905).

In giving the history of a case in which the disease was confined to one side, and in which he removed only the corresponding lateral half of the tongue, the writer dwells upon the advantages of this operation over that of cross section or entire removal. The patient is rendered much more comfortable by the retention of the lateral half than he possibly can be by the other methods.

He points out that the lymphatics of each half of the tongue are quite separate, except those of the extreme end. The blood vessels are also in large measure distinct on the two sides; and when the operation is practicable the advantages to the patient

are so great that this method of relief should be practiced. In doing the operation no glands should be left in the submaxillary triangle, and the lingual artery on that side should be ligatured.

The operation in the case reported insured a minimum of risk of recurrence, left the patient with a tongue adequately mobile for speech, and with taste and mastication little if at all affected.

Two Cases of Post-Diphtheritic Paralysis. By A. T. Musson (*Montreal Medical Journal*, September, 1905).

The first case occurred in a man aged 27 years, treated in the ordinary way and with antitoxin. Paralysis of the palate occurred while still under treatment for the disease, but it passed away before leaving the hospital, one month after the onset of the diphtheria. It recurred almost immediately afterwards in a typical fashion, extending from the throat to the arms and limbs. Sensation to touch, pain and heat were diminished. The right side was affected more than the left. Still, throughout, a certain power over the limbs was retained. Five months elapsed before recovery became complete.

The second case was not quite so severe as the first. It occurred in a man aged thirty, and was followed by equally good results. The treatment of both was chiefly of an electrical character.

Peculiar Accident to a Singer. By A. J. Brady (*Journal of Laryngology*, November, 1905), of Sidney, N.S.W.

The writer was consulted by an opera singer whose voice had suddenly collapsed while producing a difficult part in her *rôle*. Instantly she had become voiceless. She could neither sing nor speak. On examination with the laryngoscope it was found that a small blood-vessel had ruptured in the sub-mucosa of the left vocal cord, the whole of which had become blood-red.

In ten days, chiefly by rest, the cord resumed its normal appearance, save for a slight, wavy, bluish line on the upper surface. Singing was resumed, and continued for three months, when a similar failure took place. This time an adenoid was removed and six weeks' rest taken in a bracing climate.

Examination again revealed a blue spot on the upper surface of the left cord, about its middle third. Singing was not resumed, but sometime later, after much speaking, a minute

hemorrhage again occurred, spreading out from the dilated venous nodule.

The writer suggested that he might have to touch the spot with the electro-cautery point to produce a cure.

Eversion or Prolapse of the Ventricle of Morgagni. By DELSAUX (*La Presse Oto-Laryngologique Belge*), March, 1905.

This is the report of a man, aged 45 years, troubled with persistent hoarseness following tonsillitis. It had lasted for a year and a half, becoming worse during the last three months. When examined, there was inspiratory stridor, the whole larynx was reddened, and there was a swelling the size of a hazel nut under the right ventricular band. The tumor was removed with the hot-snare under cocaine. It proved to be the everted ventricle with thickened walls. Recovery was perfect.

A Case Seven Years after Complete Extirpation of the Larynx. By CHARTERS J. SYMONDS (*Journal of Laryngology*, July, 1905).

The patient was a lady, now aged 64 years. When she first came under the writer's care she had worn a tracheotomy tube for several years. There was complete laryngeal obstruction, the interior of the larynx being filled with a soft, pale growth, that could be seen by aid of the laryngoscope. The larynx was abnormally broadened. No glands were affected. In January, 1898, he removed the larynx, attaching the trachea to the skin, and suturing up the pharynx. Glands were found under both lobes of the thyroid gland. The entire thyroid was removed, including the lymphatics. The recovery was slow, owing to incomplete closure of the pharynx. Microscopical examination revealed typical carcinoma.

Traumatic myxedema followed, but this was relieved by thyroid extract, which still had to be given. Absence of recurrence was attributed to free removal of thyroid glands and lymphatics. The patient can speak fairly, as well as manage a hotel, at the present time.

Editorials.

SCOPOLAMINE-MORPHINE ANESTHESIA.

The administration of scopolamine-morphine as an anesthetic with or without additional small doses of chloroform or ether has not thus far produced results in Toronto that are satisfactory. The effects are uncertain and sometimes serious, because dangerous depression frequently follows. An excellent editorial on the subject appears in *Surgery, Gynecology and Obstetrics,* in the December issue. The writer doubts whether at the present time the surgeon or obstetrician is justified in using such anesthesia when many surgeons after prolonged trials have practically given it up entirely.

We are told by Merck that Schneiderlin-Korff's combined method of anesthesia by scopolamine and morphia is highly appreciated by many surgeons, and especially by Wiesinger. Korff himself tells, however, the effect of the administration varies considerably in different individuals, and he gives warning against large and repeated doses of scopolamine. He states that the narcotic sleep produced is often very deep, and there is danger, especially in the aged, of the tongue falling back and interfering with breathing. Korff does not recommend the administration of chloroform with that of the scopolamine and morphia.

The writer in the Chicago journal before referred to gives sadly interesting facts as to results on the Continent, which should, we think, induce physicians to refrain from using a form of anesthesia which has resulted in an alarming mortality in many localities. He tells us that De Maurans, the editor of *La Semaine Medicale,* published recently an article in which he reported twelve fatalities due to the Schneiderlin-Korff method. Zahradnicky reported 1 death in 232 cases, and, as he collected, in addition, reports of 6 deaths in 650 cases, has ceased to use the method. Barsony reported 2 deaths in 50 cases, and formed the opinion that scopolamine is a cardiac poison which cannot be regulated. A review of all the reported

cases shows that nearly, or practically all, the patients died as a result of an arrest of respiration, accompanied by cyanosis. Sometimes the depression of the respiratory function was accompanied by Cheyne-Stokes respiration.

THE FATAL SMILE.

"She just gave a little smile," said a young Toronto surgeon some years ago, when cases of ectopic gestation were not yet recognized by every intelligent physician in general practice. The patient, a young married woman, was in the best of health, and felt herself so secure that she derided the warnings of her medical adviser, and at last, silenced by his gravity, evidently felt sorry for him making, as she considered, such a fuss over nothing at all, and an indulgent little smile played about her mouth as she absolutely declined operation. The surgeon had the courage of his convictions, and gave her but a few hours to make up her mind, telling her that it must either be operation, or he would retire from the case, and she must get another doctor. That surgeon was more fortunate than some of us. He was finally able to persuade the patient, and she entered the hospital for operation, but before she could be prepared, the hemorrhage, only too correctly foretold, occurred in her private ward, and they had much ado to save her life.

That little smile is one of the most unfavorable of all symptoms. We have all seen it, often. Within a short time we have recognized it on the face of a prominent business man, working with haste and without rest, scoffing at the idea of a holiday, unwarned by anything, to fall a victim within a few weeks to neurasthenia, and walk the floor like a madman, or weep like a child by turns, with not enough nerve left to cross the street alone.

Again, the same fatal smile was seen on the face of a patient who, when told the only thing that would cure her, replied that she could not afford it, and so refused, to go and throw away with both hands more money than the cure would cost, and

then came the deluge. This symptom is hard to treat. There is no alkaloid or elixir we can prescribe for it. The physician who can meet this emergency must needs have learned long ago how to rule his own spirit, how to forecast the future, and how to make his knowledge of men and women and events aid him in persuading them to see their own best interests. The doctor of great character, the doctor who has forgotten how to be selfish, who can "get inside" the patient, and see from the patient's point of view, is the doctor who will treat successfully the symptom of the fatal smile.

NOTES.

Canadian Physicians in London, England.

The following is a partial list of Canadian physicians in London, November 16th (*Toronto Telegram*):

Dr. Donald Armour, assistant surgeon, West London Hospital; Dr. George W. Ross, pathologist and registrar at Victoria Park Hospital; Dr. George Badgerow, house surgeon at Golden Square Hospital; Dr. C. H. Thomas, house surgeon, Great Northern Central Hospital, Holloway; Dr. Colin Campbell, house surgeon at Moorefields.

Here are the other eleven holding positions in English hospitals, two being at Birmingham:

Dr. C. K. Russell, Montreal, house surgeon at the National Epileptic Hospital; Dr. George H. MacLaren, of Hamilton, senior resident medical officer at Birmingham Ophthalmic Hospital; Dr. Simpson, also of Hamilton, at Moorefields; Dr. Hamilton Wright, pathologist at West London Hospital; Dr. Charles Stuart, senior resident surgeon at Golden Square Hospital; Dr. Ambrose Stanton, senior house surgeon at London School of Tropical Medicine; Dr. E. G. Weir, at Greenwich Seaman's Hospital; Dr. W. Jones, senior house surgeon at St. Peter's; Dr. W. H. Lowry, house surgeon at Birmingham Ophthalmic Hospital; Dr. Allen, at Hackney Hospital.

Post-Graduate Students.—Of the twenty post-graduate students now studying in London, these are from Toronto:

Dr. S. H. Westman, Dr. F. H. Scott, Dr. J. A. McCallum, Dr. E. D. Carder, Dr. Percy W. Saunders, Dr. A. W. Fisher, Dr. John Malloch, Dr. William Hackney.

From Other Cities.—The twelve from other Canadian cities are: Dr. Allan Rankin, Montreal; Dr. R. D. Forbes, Montreal; Dr. Howitt, Guelph; Dr. Thomas McPherson, Stratford; Dr. W. F. Smith, Halifax; Dr. A. D. Proctor, Ottawa; Dr. Faulkner, Halifax; Dr. W. R. Alway, Dr. E. L. Hodgins, Dr. Carscaden.

Two others who have only recently returned to Toronto are Dr. David King Smith and Dr. C. W. Crane. Drs. S. H. Westman and Colin Campbell visited Toronto during Christmas week.

The Medical Council Building.

The building of the Ontario Medical Council, south-east corner of Bay and Richmond Streets, has been sold to the Continental Life Assurance Company, of Toronto, for one hundred thousand dollars. It is expected that the Council will purchase a site in or near Queen's Park, and erect a building to be used solely for its own purposes. We are told that this will entitle the building to exemption from taxation, a privilege hitherto denied because the Bay Street building has been largely used for office purposes.

The Ontario Medical Council.

The following candidates passed the final examination: J. F. Adamson, Warren; Jessie Allyn, Smith's Falls; H. J. W. Adams, Embro; E. T. Atkinson, Barrie; N. D. Buchanan, Zurich; G. I. Black, Warkworth; M. W. Berwick, Shelburne; J. A. Brown, Colborne; A. V. Brown, Neustadt; W. H. Carveth, Toronto; W. J. Cook, Coboconk; J. A. Campbell, Killin; W. J. Chapman, Holland Landing; W. B. Clarke, Toronto; A. H. Cook, Toronto; A. F. Demary, Toronto; D. Evans, Toronto; J C. Gormley, Finch; W. J. Geddes, Deseronto; J. G. Gunn, Ailsa Craig; M. Galbraith, Mount Forest; W. T. Greenwood, St. Catharines; E. A. Hammond, Peterboro'; F. N. Hughes, Fennels; A. A. Jackson, Mono Mills; A. H. Judson, Mallorytown; M. H. Limbert, Camborne; J. B.

Larocque, Alfred; J. J. Mathieson, Bloomington; H. P. Martin, Toronto; A. Murdoch, Brucefield; F. F. McEwen, Toronto; P. A. McIntosh, Dundela; J. G. McLeod, Southampton; A. H. McFadden, Millbank; C. R. Newman, Dunnville; W. G. Pruyn, Napanee; J. A. Rae, Rosseau; M. Reynolds, Kemptville; F. J. Rundle, Port Perry; J. H. Soady, Toronto; E. Scarlett, Powassan; J. R. Serson, Morpeth; A. E. Stewart, Ruthven; J. H. Todd, Toronto; W. W. Wright, Toronto; J. R. Walls, Uxbridge; F. E. Watts, Toronto; F. J. Weidenhammer, Waterloo.

RECOMMENDATIONS TO THE UNIVERSITY COMMISSION.

At a general meeting of the University of Toronto Alumni Association, held December 18th, at University College, the following recommendations to the University Commission were, after a prolonged discussion, carried, as embodying the views of the graduate body on the question of readjustment of the regulations regarding the administration and control of the University and of University College:

1. *The Lieutenant-Governor-in-Council.*—"That the powers of the Lieutenant-Governor-in-Council as regards the general administration of the University be confined to exercising a veto upon the acts of the Board of Governors."

2. *The Board of Governors.*—"That the general administration and control of the University and University College, both financial and academic, be vested in a Board of Governors composed of fifteen members, ten of whom shall be appointed by the Lieutenant-Governor-in-Council. That the Chancellor and three other members be elected by the graduates in all faculties voting as one body, and that the President of the University shall be a member of the Board *ex officio*."

"That the Board shall be entrusted with full control of the finances of the University and University College; that it have the power of appointment or dismissal of members of the staffs of these bodies, upon the recommendation of the President, and that the statutes of the Senate and other academic bodies of the University and University College be submitted to it for ratification."

3. *The Senate.*—"That the Senate consist of representatives of the graduates, of representatives of the Faculty of the University and University College, of the federated universities, and the federated and affiliated colleges; that it include also

elective representatives of the High School teachers of Ontario. and that the Minister of Education be a member of the Senate *ex officio*. That the functions of the Senate consist of the institution of courses of study, the prescription of curricula, the conducting of examinations, and the conferring of degrees."

4. *The President.*—"That the President be the chief executive officer of the University, and in view of the fact that the functions of the Senate as outlined above are purely academic in their nature, it is further recommended that he be *ex officio* Vice-Chancellor of the University and Chairman of the Senate."

There was also considerable discussion as to the position of University College. Some thought the College should be separated from the University of Toronto as to finances and administrative control. The majority, however, objected to such separation.

A REVIEW OF "A TEXT-BOOK ON OBSTETRICS."

C. B. Reed, M.D., in the new medical journal of Chicago, *Surgery, Gynecology and Obstetrics,* speaks as follows about Dr. Wright's "Text-Book on Obstetrics":

"In the flood of obstetrical text-books which has been poured out during the last five years, it is difficult to see that more than two or three have any real reason for publication.

"Aside from the desire of a writer to see himself between boards, there is always temptation on the part of the publisher, and the certain knowledge that nothing is easier than the development of the ordinary text-book. Made up of heterogeneous abstracts from the accessible literature, the compilation usually presents a large amount of trite and elementary truth, together with a generous quantity of unproved and probably undemonstrable theory, which has been passed on from book to book, without revision or question, in endless repetition, because the writer finds nothing in his own experience nor in the literature to present in its place.

"As a result, the book represents no originality, except the order in which the various subjects are arranged. It is quite a relief, therefore, to look over the work of Dr. Adam H. Wright, of the University of Toronto, which has just appeared from the Appleton press, and shows on every page the strong individuality of the author.

"This book represents the actual practice and experience of

a well-equipped and enthusiastic obstetrician, who has tried all things, and has held fast to that which he found good. He has presented the result in a coherent and palatable way that is far more attractive than usual.

"In fulfilling the requirements of a text-book, the publishers have considered and secured lightness and ease of handling. The paper does not offend by its gloss or odor, and yet does full justice to the abundant illustrations. Among the latter, it is distinctly refreshing to the eye to see pictures of Pasteur, Lister, Holmes, Sommelweiss, and others who have stamped their personalities and achievements upon the obstetrical and medical world. The value and pleasure of these pictures to the student can hardly be overestimated.

"One exception must be made to the general excellence of the illustrations. The plate entitled 'Walcher's position' must be a misnomer; it is certainly incorrect, and in no way represents that position; furthermore, there seems to be no adequate description of this important manœuvre in the text of the work.

"In the description of the implantation of the ovum, on page 18, the author has attached practically no importance to the revelations of Peter's ovum. The pathology of pregnant labor and puerperium is well covered in a practical way; in fact, the author, throughout the work, has emphasized clinical and practical methods, together with the results of his own valuable experience, which he supplements by the insertion of numerous interesting and instructive cases. The conduct of normal labor is complete and satisfactory.

"The statement that no prominent obstetrician in Great Britain or America approves of episiotomy is rather surprising, but not far from correct.

"The book, as a whole, is delightfully free from the tedious and uninstructive discussion concerning things we do not know, and is complete and satisfactory in regard to what we do know, but its main recommendation is the strong, virile flavor of Dr. Wright which pervades its pages."

At the annual meeting of the Post-Graduate Medical Society, of Toronto, held on Dec. 14th, at the Toronto General Hospital, the officers were elected as follows. Honorary president, J. N. E. Brown, M.D.; president, E. C. Burson, M.D.; first vice-president, L. Killoran, M.D.; second vice-president, R. G. Snyder, M.D.; secretary-treasurer, H. Spohn, M.D.

Personals.

Dr. Chas. O'Reilly expects to sail for Canada, January 17.

Dr. A. H. Macklin has removed from Mildmay to Goderich.

Dr. John R. Stone, of Parry Sound, spent Christmas in Toronto.

Dr. Colin A. Campbell returned from London, England, December 24th.

Dr. C. H. Brereton, of Chesley, spent his Christmas holidays in Toronto.

Dr. R. O. Fisher, of Oakville, was married to Miss B. Sims, November 22nd.

Dr. J. E. N. De Haitre (Toronto, '03), has commenced practice in Sudbury.

Dr. L. F. Millar, of Toronto, is spending the winter in Pasadena, California.

Dr. W. H. Philip (Tor., '90), has removed from Arthur, Ont., to Wappayello, Mich.

Dr. Harold Parsons, of Toronto, went to Port Hope for a few days at Christmas time.

Dr. A. Primrose, of Toronto, left December 26th, for a visit to the Maritime Provinces.

Dr. Macdougall King (Tor., '02), who practised for a time in Arizona, is now settled in Ottawa.

Dr. D. Duff Campbell (Tor., '04), has been appointed House Surgeon in Harlem Hospital, New York.

Dr. O. T. Dennick, of New York, paid a visit to his relatives in Deer Park, Toronto, early in December.

Dr. Drummond, the famous habitant poet, delivered one of his popular lectures in Toronto, December 29th.

Dr. Max Otto Klotz (Tor., '02), of Ottawa, who recently returned from Germany, is now in the Royal Victoria Hospital, Montreal.

Dr. John T. Fotheringham, of Toronto, has removed from 36 Carleton Street, to 20 Wellesley Street. He left Toronto for a visit of a week to Ottawa, December 28th.

Dr. J. R. Walls (Trinity, '91), of Denver, Colorado, has removed to Uxbridge, Ont., where he has entered into partnership with Dr. Horace Bascom. He is now occupying Dr. Clark's old office.

Obituary.

BENJAMIN H. LEMON, M.D.

Dr. Lemon, of Thorold, graduated from Victoria University in 1867, was found dead in his bed, November 28th. He was at one time Mayor of Thorold, and was at the time of his death Coroner for the Counties of Lincoln and Welland.

AUGUSTUS JUKES, M.B.

Dr. Jukes, formerly of St. Catharines, for some time Surgeon, North-West Mounted Police, and lately a resident of Wellington, B.C., died in Vancouver, Dec. 6th. He became a licentiate of the Medical Board in 1849, and received the degree of M.B. from Trinity University in 1865.

WM. GEDDES STARK, M.D.

Dr. Stark, for many years a well-known physician of Hamilton, but lately a resident of Secane, Pa., U.S.A., died December 12th, after a short illness, from pneumonia, aged 63.

JOHN HENRY McFAUL, M.D.

Dr. J. H. McFaul, of Toronto, died suddenly of angina pectoris, at his late residence, 197 Carleton Street, aged 66. He was graduated M.D. from Trinity University in 1888, and since then had practised in Toronto. He possessed true kindness of heart, and was a very conscientious and competent physician. He also took great interest in educational matters, and was for eleven years secretary of the High School Board of Toronto before the amalgamation of the Public and High School Boards.

SIR JOHN BURDON-SANDERSON, M.D., F.R.S.

Sir John Burdon-Sanderson, England's great physiologist, and late Regius Professor of Medicine in the University of Oxford, died of broncho-pneumonia and heart failure, November 23rd, aged 77.

JOHN CROFT, F.R.C.S.

Mr. Croft, well known to many Canadians as one of the surgeons on the staff of St. Thomas' Hospital, London, England, died, November 21st, aged 72.

WILLIAM JOSHUA ARNOTT, M.D.

Dr. W. J. Arnott, of Berlin, Ont., died December 12th, 1905, after a short illness, from cerebral meningitis, aged 44. He was graduated from Trinity in 1893. He at once settled in Berlin, and soon built up a large practice.

AMBROSE LOOMIS RANNEY, M.D.

Dr. A. L. Ranney, of New York, died suddenly of heart disease, December 1st, aged 58. After some years of general practice he became enthusiastic over the connection between eye strain and various nervous affections. In consequence he devoted himself to ophthalmology, and soon achieved great success in that line.

Book Reviews.

A Hand-Book of Intestinal Surgery. By LEONARD A. BIDWELL, F.R.C.S., Surgeon, West London Hospital; Lecturer on Intestinal Surgery, and Dean of the Post-Graduate College; Consulting Surgeon to the Blackheath and Charlton and Diss Hospitals, etc. Pages, 167. Illustrations, 91. Price, $1.50. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1905. Toronto: J. A. Carveth & Co., 434 Yonge Street. Montreal and Winnipeg: Chandler & Massey, Limited.

The above volume is a compilation of lectures delivered in the West London Post-Graduate College accompanying practical demonstrations. The work is very comprehensive and concise. The early part is devoted to the many kinds of sutures and anastomoses, pointing out which is the best. One can safely say that in this particular branch of surgery, while a great deal has been written that need not have been, yet in the work before us there is every justification for its existence. It is based on practical work to aid the beginner, and as such should meet with a hearty reception. We know of no small volume that contains so much information, nor information so well put. In this country, at any rate, by a great many of us, marine sponges have been entirely eliminated, and we do not think, notwithstanding the very careful directions for preparing, that it is possible to be absolutely sure of them, and consequently we prefer wipes made up of material that we can be sure of its sterilization.

The author's remarks on "Before and After all Abdominal Operations," is every word of it good, and can be used as a guide, knowing that we are following good advice.

We thoroughly recommend the work, and congratulate the publishers on the very careful manner in which the illustrations have been prepared and printed, as well as the letterpress.

A Text-Book of Physiology: For Medical Students and Physicians. By WILLIAM H. HOWELL, Ph.D., M.D., LL.D., Professor of Physiology in Johns Hopkins University, Baltimore. Octavo volume of 905 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $4.00 net; Half Morocco, $5.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

Dr. Howell's many years of experience as a teacher of physiology in several of the leading medical schools is evident throughout the entire work in the simple and clear style and in the practical handling of his subject. The author has laid main emphasis upon those facts and views which will be directly helpful in the study of general pathology and in the practical branches of medicine. At the same time, however, we are gratified to see that Dr. Howell has not ignored the

experimental side of the subject. This we consider very important, for it has been through individual research that all the great advances in physiologic knowledge have been made. The entire literature of physiology has been thoroughly digested, and the important views and conclusions incorporated. Indeed, the author has prepared a text-book which, while preserving the scientific spirit, is at the same time simple and modern in presentation. Every notable advance in physics or chemistry as influencing physiology has been carefully noted. Illustrations have been most freely used, greatly helping in understanding and supplementing the descriptions in the text. Especially valuable are those illustrations employed to make clear the more intricate anatomic and physiologic mechanisms. Altogether, we consider it a very valuable book, because it is accurate, up-to-date, and highly practical.

Introductory Physiology and Hygiene. By A. P. KNIGHT, M.A., M.D., Professor of Physiology, Queen's University, Kingston. Toronto: The Copp, Clark Co., Limited. Price, 60c.

This is, as the title page describes it, "A series of lessons in four parts, designed for use in the first four forms of the public schools." We are glad to welcome any effort to improve the knowledge, and as a consequence the practice, of the people in matters which concern their health.

Professor Knight takes the subject up from the physiological side first and mainly, basing a few of the more general requisites in hygiene upon the physiology of the various parts and systems of the human organism. Regarding the evils of alcohol, tobacco and anti-vaccination, the doctor gives no uncertain sounds. His warnings are correct and apparently still much needed. He gives significant quotations from Sir Frederick Treves, Lauder Brunton, and a host of others, authorities in our foremost universities, hospitals and medical journals, as to the toxic effects of tobacco and of alcohol, even in "moderate" quantities. He also gives some interesting experiments on their toxic effects on some of the lower animals.

The little book should serve a useful purpose in our public schools, and we strongly commend the precepts it contains.

Bacteriology and Surgical Technic for Nurses. By EMILY M. A. STONEY. Second edition, thoroughly revised and enlarged by F. R. Griffith, M.D. Philadelphia, New York and London: W. B. Saunders. Toronto: J. A. Carveth & Co., Limited.

Miss Stoney's works have long had a good reputation as text-books for nurses, and since her death the revised editions

issued by her publishers have had a large sale. The present volume has much to recommend it, being clear, thorough and practical in its treatment of the various subjects. The first part (56 pp.) is an outline of bacteriology; the second part, which includes chapters on obstetrical nursing, gynecological examinations, hygiene, etc., is on surgical nursing.

A Manual of Diseases of Infants and Children. By JOHN RUHRAH, M.D., Clinical Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore. 12mo volume of 404 pages, fully illustrated. Philadelphia and London: W. B. Saundrs & Company. 1905. Flexible leather, $2.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

This little book, which has been prepared for medical students, presents the subject of pediatrics in a clear and concise manner. The author has outlined the therapeutics of infancy and childhood in a way that cannot fail to make for this work a place of first importance in its field. He has given explicit instructions for dosage and prescribing, and also a number of useful prescriptions. Infant feeding is given in detail. A very valuable feature consists in the many references to pediatric literature, so selected as to be easily accessible by the student, enabling him to ascertain the sum of knowledge on any given disease.

A Treatise on Diseases of the Skin. For the use of advanced Students and Practitioners. By HENRY W. STELWAGON, M.D., Ph.D., Professor of Dermatology, Woman's Medical College, Philadelphia. Fourth edition, revised. Handsome octavo of 1,135 pages, with 258 text-illustrations, and 32 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Company. 1905. Cloth, $6.00 net; Sheep or Half Morocco, $7.00. Toronto: J. A. Carveth & Co., Limited.

This is the fourth edition of Dr. Stelwagon's book, which is too well known and greatly appreciated to call for any extended notice. The very definite, clear and practical nature of the book, the comfort found by the busy practitioner in the details of treatment given, and the brief yet satisfactory way in which each subject is finished and disposed of—above all, the accuracy and authority which are characteristic of this text-book—have led to its deserved success. In the present edition the author deals with the three new therapeutic agencies which have recently been added to the resources of the dermatologist, viz., the Finsen light, the Roentgen rays, the high-frequency current, and a good many changes and additions have been made, redundant material being omitted, so that the book is not much larger. We commend it cordially to our readers.

Lectures on Auto-Intoxication in Disease, or Self-Poisoning of the Individual. By Ch. Bouchard, Professor of Pathology and Therapeutics; Member of the Academy of Medicine and Physician to the Hospitals, Paris. Translated, with a preface and new chapters added, by Thomas Oliver, M.A., M.D., F.R.C.P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, Newcastle-upon-Tyne; formerly Examiner in Medicine, Royal College of Physicians, London. Second Revised Edition. Crown octavo, 342 pages, extra cloth. Price, $2.00 net. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

The names of Prof. Bouchard and Prof. Oliver are a sufficient guarantee that the book will rank as a classic. Everything that can be said on a subject which has sprung into great prominence during the last decade, is to be found, concisely stated, in this volume. A most interesting and useful part of the work is the careful attention given to treatment of the various diseases which naturally come under discussion—a feature which commends itself to every working physician in this Nihilistic age. Altogether it is a very desirable monograph to study.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the medical and surgical science. Edited by Dr. H. A. Hare and H. R. M. Landis. Vol. IV. December, 1905. $6.00 per annum. Philadelphia and New York: Lea Bros. & Co.

This volume deals with diseases of the digestive tract and allied organs, the liver, pancreas and peritoneum (Dr. J. D. Steele); genito-urinary diseases (Dr. Wm. T. Belfield); diseases of the kidneys (Dr. J. Rose Bradford); anesthetics, fractures, dislocations, amputations, surgery of the extremeties and orthopedics (Dr. Jos. C. Blondgord); and a practical therapeutic referendum (Dr. H. R. M. Landis). The conclusion of the seventh year finds this quarterly far in advance of any other, in the epitome and bibliography of current medical literature.

Selections.

The Abrupt Onset of Typhoid Fever.

The importance of the irregular types of typhoid, especially of those cases in adults with abrupt onset, is emphasized by M. Manges, New York (Journal A. M. A., December 30), both on account of the importance and difficulties of their diagnosis and their high mortality. He notes briefly some of the literature of the subject, and remarks that a distinction must be made between these cases and those that seem to be abrupt, but are not—the perforative cases. He finds from the records that the cases with true abrupt onset formed about 10 per cent. of all cases in the Mt. Sinai Hospital; they are, therefore, not infrequent. Cases of abrupt onset may be ushered in by various symptoms, either with chills, single or repeated, severe pains in the head, abdomen or other parts of the body, or by violent nephritis, pleurisy, grip, diphtheria, cerebrospinal meningitis, etc.; still another type are the hemorrhagic cases. A unique case in which the initial symptoms were tachycardia and heart failure is mentioned. Some cases of paratyphoid fever must also be differentiated from these cases of sudden onset. The cases resembling cerebrospinal meningitis are usually readily differentiated by their low leucocyte count, though clinically they may run an identical course for several days. The pneumo-typhoid and pleuro-typhoid types are well known and hardly require description. The types beginning with pain, simulating appendicitis or with pain in the head, are noticed, and cases where the diagnosis was difficult are mentioned. Another type is that marked by sudden high fever, with or without chills, the fever sometimes reaching its maximum of 105 to 107 in the first twenty-four hours, and often suggesting severe poisoning rather than typhoid fever. Death usually occurs at the end of the first week. Fortunately these foudroyant cases are rare. The hemorrhagic cases of typhoid are often of sudden onset and run a rapidly fatal course. Malaria may complicate the onset of typhoid, and, aside from this, repeated small chills are very common in the beginning, of the attack and repeated severe chills without any malarial cause may also occur. Sudden onset in the throat is rather rare and appears in the shape of the characteristic Bouveret ulcers or severe pharyngitis. Diphtheria of the pharynx may be associated with sudden onset of the disease in some cases, examples of which have been previously

published by Manges. Another type, illustrated by a case, is that of suddenly occurring severe nephritis with continuous fever, and the grip type is still another of special importance and gravity as regards the diagnosis. The progress of the case, the roseola, the Widal reaction, etc., alone enable us to differentiate these cases. Manges explains these cases of sudden onset by a silent development of the germs in the system without presenting any marked clinical features until the disease is well developed. In some cases, however, a rapid development of the organisms in the body must be invoked to account for the condition. This rapid growth is favored by pre-existing infection of some kind, or other causes lessening the power of resistance. Whatever may be the explanation, the clinical fact remains that in about 10 per cent. of cases of typhoid an abrupt onset may occur with aberrant clinical manifestations, and that in any cases of severe acute illness of sudden onset with marked disproportion between the severity of infection symptoms and the clinical findings, a properly applied test for the Widal reaction must never be omitted. The fact that this reaction occurs more early in cases of typhoid fever of acute onset gives it a peculiar value in these cases.

Acute Hemorrhagic Pancreatitis.

C. F. New, Indianapolis (Journal A. M. A., December 30), reports a case of acute hemorrhagic pancreatitis occurring in an insane woman aged 35. The attack began with nausea and vomiting, soon followed by severe epigastric pain and tenderness, requiring opiates, and followed later by fever, tympanitis, rigidity and general jaundice. Death occurred suddenly within thirty-six hours from the onset of the disease. The autopsy revealed the pancreas except a small portion of the head and tail, involved in a soggy mass of coagulated blood, together with lesions of the liver, kidneys and spleen, an atheromatous condition of the larger arteries and some fatty degeneration of the heart. The author discusses the symptoms and points out the difficulties of the diagnosis. The pancreas is seldom alone diseased, its functions can be more or less fully performed by other organs, or by a small intact remnant of its own tissues. Still, he says, there are some things that should arouse suspicion of its involvement. Fitz has laid down a rule that when a previously healthy person or sufferer from indigestion is suddenly seized with violent pains in the epigastrium, followed by vomiting and collapse, and within twenty-four hours by a circumscribed epigastric swelling, tympanitis and

resistance, with slight rise of temperature, one should suspect acute pancreatitis. The crystals described by Cammadge (see abstract in the *Journal A. M. A.*, July 29, 1905, p. 359) are also claimed to be pathognomonic. The only practical treatment is surgical.

Physiology of the New-born.

Landois (*Geburt. u. Gyne.*) from his observations of fifty new-born infants during the first ten days finds that the mother is able to feed and satisfy the child after an average of 45.1 hours. The minimum is 9.8 hours and the maximum 72 hours. Primiparæ on the average satisfy the child in 43.8 hours, the minimum being 29 hours and the maximum 71 hours. Multiparæ average 39.7 hours, the minimum being 9.5, and the maximum 72 hours. The infant drinks during the first day about five grammes, the maximum being 50 grammes and the minimum 0 grammes. The child is as a rule able to suck about the fourteenth hour. Children in whom the umbilical cord has been tied late drink more than those in whom the cord has been tied early.—*Medical Age.*

Uric Acid Diathesis.

Almost every layman, and a multitude of doctors, continually speak of being "full of uric acid," meaning by this that they have muscular stiffness, or that the urine shows an excess of urates or even uric acid crystals. In the majority of instances this excessive deposit of urates or uric acid depends not on any abnormality in bodily metabolism, but on conditions of the urine which cause the precipitation or deposition of these solids. There is either a condition of acidity or a minimum quantity of mineral salts, and as a result precipitation takes place. For this so-called "uric acid diathesis" physicians prescribe large quantities of lithium and copious draughts of water. There can be no doubt that the water is advantageous, but the lithium only does good until a certain degree of alkalinity is reached, when it is of little value, and if the doses are large it acts as a depressant to the general system. It is quite true that persons who eat heartily, drink alcohol, and take no exercise, are not infrequently overloaded with effete materials representing imperfect metabolism, which cause disagreeable symptoms. It is also perfectly true that exercise, a proper diet, and the use of plenty of drinking water will overcome these symptoms, but this does not prove that the patient is a sufferer from "uric acid diathesis."—*Hare's Text-book of the Practice of Medicine,* 1905, *p.* 753, *and J. A. M. A.*

Miscellaneous.

Reminiscences of Dr. Thomas Addis Emmet.

One of the most interesting figures in medicine still with us is undoubtedly Thomas Addis Emmet, of New York, who has recently been persuaded to make public some reminiscences of his earlier days (*a*). How much medical education in America has altered since his student days is shown by the fact that, although he numbered Robley Dunglison and J. K. Mitchell among his teachers at the University of Virginia, yet he passed "a creditable examination" at the graduation in medicine, "without having dissected more than the sartorius muscle, without having written a prescription, or having attended an obstetrical case." Of the academic instruction, of the time Dr. Emmet gives one specimen, which should render its author, Dr. Wallace, known to fame. The subject was hernia, the weather hot, the professor a man of twenty-one stone, and the lecture was as follows: "When you come to operate for hernia you will find little you have been taught to expect, and I cannot now enter into a fuller explanation, but it is, in a nutshell, cut until you come to the gut, and you will be a damn fool if you cut it; good-day." Dr. Emmet's earliest professional work was as emigrant refuge physician in New York, and as illustrative of the horrors of an outbreak of cholera, he tells us. "On two occasions, when a larger number of bad cases than usual had been admitted, I found next morning all the patients and nurses had died since my last visit.—*Medical Press and Circular.*

Cheerfulness in the Sick Room.

Too much cannot be said about the value of cheerfulness in the sick room. An easel, with a bright, pretty picture, changed as often as possible, is an attractive thing in the sick-room. A bright bit of china, any curios or dainty bit of bric-a-brac, borrowed for the time, will help to relieve the monotony of the long wait in bed or even more tedious confinement on a single floor during the long convalescence. A growing plant which is coming into bloom or a fernery will often give a great deal of pleasure. Try to furnish quietly a series of dainty surprises to the invalid in the preparation of the food and the china service. Use first one pretty cup and then another, unless, indeed, she fancies one and insists upon it, as often happens. Above all things, be calm and equable, in spite of querulousness, and humor fancies where they are not a source of absolute harm. A nervous person should never attempt to be a nurse. It requires abundance of nerve and presence of mind to meet

the emergencies that may arise, the sinking spells that come over even a convalescent, and that, if not met with proper stimulants, may result in the most fatal consequences.—*Family Doctor.*

Surgery During the Russo-Japanese Naval War.

At the meeting of the Association of Military Surgeons of the United States, Surgeon-General Suzuki, of the Imperial Japanese Navy, made an address on his experiences during the Russo-Japanese naval war. He served on the flagship of Admiral Togo as surgeon-in-chief of the combined fleets. He considered the treatment and management of wounds and the sanitary arrangements of the fleets.

The instructions issued by him before leaving the naval base were: (1) the strictest attainable asepsis; (2) conservative surgery; (3) avoidance of amputations on war ships, and transference of the wounded to hospital ships as soon as possible after the engagement. From February, 1904, to August, 1905, out of 1891 casualty deaths, 1,448 were due to shipwreck through mines, and only 563 to wounds in battle. Of 1,791 wounded during the same period, 647 were transferred to hospital with only 32 deaths. The methods used were those generally employed.

He divided the proper treatment of the wounded in war into two stages: during action, only first aid; after action, temporary relief in the ship's surgery, the patient being then transferred to the hospital ship.

General Suzuki then discussed the proper location of the ship's surgery, which he said should be below the water line; the transportation of the wounded; the supply of dressing materials, which, with praiseworthy liberality, had been made amply large for all the needs of the fleet; he described the first aid package issued by him; the attention paid in the Japanese navy to the eyesight of gunners; the number and character of the wounds inflicted; the sanitary arrangements, among which may be particularized the diet, consisting of biscuit, 6 ounces, or bread, 3 ounces; rice, 12 ounces; barley, crushed, 4 ounces; meat, preserved, 5 ounces, or fresh, 7 ounces; fish, preserved or fresh, 5 ounces; vegetables, fresh, 15 ounces, or dried, 3 ounces; tea, ½ drachm; barley, roast, 3 drachms; sugar, 6 drachms. To this must be added the following weekly allowance for cooking: Peas or beans, 2½ ounces; wheat flour, 2 ounces; sugar, 3½ ounces; soy, 3 ounces; sesame oil, 1 drachm; salt, 1½ ounces; fat, 1 ounce. Supper

ration: Biscuit, 3½ ounces, or bread, 5 ounces; tea, ½ drachm; sugar, 4 drachms. Water was supplied by two water ships distilling daily about three hundred tons of water, as well as by water transports. Every one was required to take a bath and to put on a change of clothing before going into action, and General Suzuki attributed to this fact the comparative freedom from sepsis of the Japanese in the war.—*St. Louis Medical Review.*

Fruits and Nuts as Food.

The Department of Agriculture has for several years been conducting a series of experiments to determine the dietetic value of different foods. In the majority of the dietetic studies, and all but one of digestion experiments, fruits and nuts constituted all or almost all of the diet. The results show that both fruit and nuts should be looked upon as foods rather than accessories to diet. The articles studied include tomatoes, applies, bananas, cantaloupes, grapes, verdal, cornichon, Tokay, muscat, scarlet haws, pears, pomegranates, persimmons, oranges, strawberries, watermelons, figs, almonds, and peanut butter. The only animal foods allowed were cottage cheese and eggs, and these were given in limited quantities. The cost of such a diet varied from fifteen to eighteen cents a day. Comparative experiments were carried along in which animal foods were employed under the usual conditions of living, and in these the daily cost ran from 26 to 30 cents. It was found that the food eaten supplied about 60 per cent. of the protein usually secured by the average meat diet, while health and strength continued the same, if not improved, and in two or three cases there was a slight gain in weight and flesh.

The main object of this series of experiments was to furnish data on the value of nuts as food. Fruits contain little protein, and nuts are relied on in this plan of eating to balance the ration. Fruits are rich in carbohydrates, and nuts contain fat. A pound of peanuts, which costs seven cents, furnishes 1,000 calories of energy at a cost of three and one-half cents. The average price per pound of the protein of nuts ranges higher than the corresponding average of meats, but the cost per pound of peanut protein is lower than for meats, eggs, milk, dairy products, and prepared cereals. Although peanuts supply protein and energy for a smaller sum than bread, they are outranked by dried beans, which at five cents a pound will supply for ten cents over 200 grammes of protein and 3,040 calories of energy.—*Scientific American.*

nary Erysipelas of the Larynx.

. Blum (*Deutsche Medizinische Wochenschrift*) reports cases of primary erysipelas of the larynx. The diagnosis difficult but was confirmed by the spread of the disease to face. One case was preceded by a subacute laryngitis last- several weeks. The other developed after the crisis of an ack of croupous pneumonia. Only one case showed any ns of stenosis.—*Lancet Clinic.*

SICK!

(Elwin L. Sabin in "In Lighter Vein," in the November *Century*.)

When mother's sick the house is all
So strangely hushed in room and hall!
But mother never will admit
She's suffering a single bit!
She won't let people do a thing—
There's nothing anyone can bring—
She just lies there, and tries to fix
Herself by cunning little tricks!
And as for doctor—why, the word
She scouts as being most absurd.
And when he comes he has to guess
At symptoms that she won't confess;
And then he's apt to frown and say:
"You should have had me right away.
I'll come again this evening"—for
It's bed, you see, a week or more!

When father's sick—I tell you, now,
You ought to hear the dreadful row!
The talk of "Dying," and the groans!
The orders in convulsive tones!
The hasty runnings to and fro:
To rearrange the pillow—so;
To fix hot-water bag and shade;
For mustard plaster, lemonade!
Appeals to get the doctor, quick—
And "Can't you see I'm awful sick?"
And then the doctor sits and hears
While father grunts his pains and fears.
He leaves some drops, and tells us: "Hum!
Unless I'm needed I sha'n't come
Again. I think he'll do all right."
And father's up, perhaps, by night!

Elliott Schmidt has, says an exchange, discovered in a prehistorical sarcophagus a vesical concretion. It lay between the two iliac bones of an adolescent sixteen years old. The age of the tomb has been estimated at 7,000 years or more. Examination of the vesical concretion showed that it consisted exclusively of uric acid with an envelope composed of phosphates.

Treatment of Erysipelas of the Face.

Z. Edwards Lewis, of New Rochelle, N.Y., treats erysipelas of the face with ichthyol. It may be used in any strength, but a 40 to 50 per cent. solution is his standard. The solution is painted carefully over every bit of the inflamed surface and over at least half an inch of all adjacent sound skin. According to the virulence of the attack and to the time that has elapsed from the onset, he regulates the frequency of reapplication—from six hours to three days. The face should not be washed for reapplication unless there is a material decrease of tumefaction. The fresh solution, as it is applied, revivifies all that remains.

The effect of the application is immediate, and in a very short time the patient gives expression to the relief felt. Tumefaction subsides—sometimes with astonishing rapidity —and generally there is uninterrupted recovery. Applications are repeated at increasing intervals till a thorough washing, after a three days' interval, shows no disease. The applications are to be made without friction, with a soft brush or pledget of cotton, preferably the former.

The conditions of general health and bodily functions are to be inquired into, and any needed regulations secured. Loaded primæ viæ and imperfect depuration are a serious bar to remedial progress.

The sole objection to the treatment is cosmetic. It looks almost as bad as a silver nitrate stain, but is not so permanent, most of it being removed by one washing. The feelings of the patient and of onlookers may be conserved by covering the fact with a mask of soft white muslin or linen, carefully adjusted. If this sticks, a little gentle dabbing with wet cotton will loosen it. Obviously, not the slightest force is to be used in the removal.

In cases where the elevation of temperature is too great to be negligible, a good antipyretic of the coal-tar series is indicated; and the added effect of this in soothing irritability and pain is often a desideratum.—*N. Y. Med. Jour.,* July 22nd, 1905.

Professor Eberth, Director of the Pathological Institute in Halle and discoverer of the bacillus of typhoid fever, celebrated his seventieth birthday on September 21st. He was born in Würzburg, and received his medical education there. In 1865 he was appointed professor of pathological anatomy in Zurich, and was called to Halle in 1874.

Cheap Alcohol.

The number of deaths and of cases of blindness due to the use of wood alcohol again directs attention to the importance of a cheap alcohol in the arts. Germany has solved this problem by employing free of tax a denaturized spirit—that is, an alcohol that has its taste so far altered that it cannot be used as a beverage. This has been proposed in this country, and so far has met with some objections, and it is claimed that the spirit would be redistilled. Germany has a tax on spirits used for drinking purposes, and if they can simply employ a method of this kind it surely ought to be possible to safeguard the revenue derived from alcohol in this country. The importance of Germany in the production of chemicals has largely been influenced by the fact that they are able to obtain at practically cost price ordinary ethyl alcohol. At our doors is an unlimited supply of cheap alcohol, the price never exceeding 12 cents a gallon and often falling as low as 8 cents. This alcohol is made in Cuba from molasses, and is now largely a waste product, as it does not pay to distil the alcohol, there being little or no market for it. The high price of alcohol has admitted of the exploitation of the dangerous wood alcohol with all its attendant evils. This would be largely overcome by the use of a denaturized ethyl alcohol, which is quite as cheap as if not cheaper than the ordinary wood alcohol.

My Changes of View in Appendicitis Work.

R. T. Morris says that although formerly he used to forbid morphine altogether, his views on the subject have changed and he now gives it cautiously in cases in which there is great restlessness. The drug is still regarded as a double-edged sword, however. Both gauge packing and iodoform gauze have been abandoned altogether, as well as the use of buried sutures of silkworm gut. A standard length of one and one-half inches for the incision has been adopted for nearly all instances, including cases of abscess and peritonitis, and it has been found safer to deal with adhesions by touch than by sight. The time limit has also been greatly reduced, and now it is common to have the time from the first incision to the last suture occupy not more than seven to eight minutes. All patients are operated, even if moribund, a preliminary infusion of salt solution being given; adhesions are freely separated if necessary but not otherwise, and the idea of flushing out the abdomen has been dropped. After eliminating the features which seemed

to have a special death-rate of their own, viz., gauze packing, iodoform gauze, long incisions, and the expenditure of time in unnecessary detail of work, one hundred consecutive operations were published with a 2 per cent. death-rate. The author does not favor the removal of the normal appendix in the course of other operative work, and he now uses a cigarette drain in all cases in which pus or septic debris have been left in the peritoneal cavity. The dictum of operating as soon as the diagnosis is made holds good, with certain exceptions, but it is still a question what to do with patients who are convalescing from the attack. In interval cases it now seems best to operate only when on palpation the appendix is found to be the definite seat of chronic infection or of adhesions which cause symptoms.—*Medical Record*.

Cerebro-Spinal Meningitis.

N. B. Foster, in the *American Journal of the Medical Sciences* for June, believes that in cerebro-spinal meningitis there is no method or drug that has any apparent affect on the course of the disease. Efforts toward decreasing the suffering of the patient and preserving his strength is the most we can do at present. The patient should be isolated; the room should have free ventilation and be somewhat darkened. Restraint is nearly always necessary to prevent self-injury, and this is best effected by passing a folded sheet around the back of the neck, and under the arms anteriorly, the ends being tied to the sides of the bed. The ankles are thickly padded with cotton-wool, and bandages passed over this, and made fast to the bed. Of medicinal treatment the most important indication is for sedatives, and of these opium is doubtless the best. In some cases of extreme delirium, huge quantities of the drug may appear to produce no effect; bromides and chloral may be added to morphine, but his experience has been that there are cases in which the delirium and convulsive seizures cannot be controlled by drugs in doses within the bounds of safety. Under such circumstances a do-nothing policy is best. The delirium *per se* is not an indication for treatment of any sort, but the ceaseless activity that attends it is very wasteful of the patient's vitality. Potassium iodid has been used largely in this disease, but he has never noted any influence on the course of the disease. He is convinced that lumbar puncture has a therapeutic as well as diagnostic value. In all cases in which the symptoms have persisted for more than a few days, he is accustomed to perform lumbar puncture every two or three days. He has observed (1) lessening the delirium when delirium was present,

(2) alleviation of headache, often to entire cessation, (3) awakening from a semi-comatose condition to consciousness, and an ability to rationally answer questions. One lumbar puncture is not sufficient; the fluid slowly reaccumulates, marking the return of stupor and headache. It is a palliative means only, not a curative one.—*The Cleveland Medical Journal.*

Carbuncles.

Creel has relied on ecthol given internally, in doses of a teaspoonful, in cases of carbuncles, flax-seed poultices applied locally, emptying of pus, scraping out of dead tissue and cleansing with peroxide of hydrogen; after this a topic application of ecthol on absorbent cotton every four to eight hours. The average duration of this treatment in his cases was ten days.—*Journal of the American Medical Association.*

Ebstein gives rest and warmth as important factors in treatment of the morbidly lean. The diet, however, is the main point in the conduct of the case. He favors a diet rich in fats, as more conducive to the taking on of flesh than the carbohydrates, and being less liable to cause fatty accumulation about the heart. The introduction of fats into the dietary regimen should be gradual and accompanied by careful management of the bowels.

What the "Grip" Is.

Asked what made him look so ill, an Irishman replied, "Faith, I had the grip last winter." To draw him out, the questioner asked, "What is the grip, Patrick?"

"The grip!" he says. "Don't you know what the grip is? It's a disease that makes you sick six months after you get well."—*Ladies' Home Journal.*

The Strategy of Samuel.—Proud Father—"I tell you, sir, that boy of mine will be a wonder."

Friend (wearily)—"What wonderful thing has he done now?"

Proud Father—"Why, the other day he ate all the preserves in the pantry. I overheard him say, as he smeared the cat's face with the stuff: 'I'm sorry, Tom, to do this, but I can't have the old folks suspect me.'"—*Smart Set.*

RESPIRATORY AFFECTIONS: SYMPTOMS AND THEIR TREATMENT.

By JUSTIN HEROLD, A.M., M.D.,

Former House Physician and Surgeon, St. Vincent's Hospital, New York City; Former Coroner's Physician, City and County of New York; Member of New York County Medical Association, County Medical Society, Medical Society of the Greater City of New York, Medico-Legal Society, Society of Medical Jurisprudence, and New York Academy of Medicine.

Mathematical precision, it must be admitted, has its place no less in medicine than in its legitimate field in the study of the higher classics. This precision, in the therapeutic sense, applies to the exact dosage of preparations used by the busy practitioner in his every-day experience. How often do we attain proper results from the use of drugs; how often results that are not only improper, but even dangerous? Precision in dosage can only be obtained by constant study on the part of our co-laborer, the pharmaceutical chemist—study embodying experimentation, the comparing of results, re-experimentation, and, finally, the circulation of the decisive product in the hands of the practitioner.

The past few months have afforded me, and no doubt others, opportunities to test the efficacy of the therapeutic qualities of the various remedies vaunted as certain to relieve the harassing symptoms attendant on the diseases produced by the bacillus of that nineteenth-century infant, "La Grippe."

I refer to this epidemic particularly, because it had not manifested itself in such virulent form since the memorable grippe epidemic of 1889. The author of this paper, in the past few months has had occasion to employ the several preparations recommended for the relief of the distressing respiratory symptoms attendant upon "la grippe." These manifestations, from my view-point, have been characterized principally by cough and dyspnea, in other words, "dyspneic cough." Expectorant mixtures, anodyne solutions, together with hypodermic medication, produced in me a disgust; and why? Simply and undeniably for the reason that the ordinary cough mixtures contain the opium preparations in such combinations as to leave a depressing effect, which, especially in cases of the grippe of the "depressing or melancholic" type, enhances the already depressed feeling. Combinations of expectorants with stimulating ingredients had no less the same effect.

The feelings of the physician are not heightened when his "stand-bys" serve him so poorly; neither are the feelings of the patient calculated to give him increased confidence in his physician. Where lies the fault—in the opium, in the morphine, in the codeine, in the heroin? No, the fault lies in the unstable (or whatever you may call it) combination, or ill-combined ingredients. In seeking for a remedy to relieve the harassing night cough of an attack of "bronchitis due to grippe," in a member of my own family, I chanced to come across a preparation of heroin, which, of all remedies tried, gave relief. I refer to Glyco-heroin (Smith).

Glyco-heroin, in all the cases in which I have used it, has never caused vomiting, an important point for the physician. Is not the stomach the physician's best friend in the treatment of diseases other than obstructive or malignant affections? Another important point noted was that this preparation of heroin—Glyco-heroin (Smith)—never played pranks with the structures composing the vaso-motor system. Now, what do we, in treating disease, want in addition to a good stomach and a stable nervous attachment? We want rapid action. That I effected through the use of Glyco-heroin.

You cannot produce toxic effects with this preparation, as its effects are lasting, and in most cases do not necessitate the use of the drug at very frequent intervals. Glyco-heroin allays cough, without doubt better than any remedy I have used this winter, and that without the sometimes disastrous results of other preparations of the papaver group. Respiration is stimulated, not in number, but in the depth of the inspiratory act; thus full and complete oxygenation takes place, an important adjunct to the helpful effects of drugs in general, and saving the patient that expensive tank of oxygen. Given full and complete oxygenation, all other symptoms must accordingly diminish; thus temperature and pulse-rate are reduced to a normal condition. Elimination of noxious products not being interfered with, the excretion of urine is brought to the normal under the use of Glyco-heroin. It is well known that diminished quantity of urine follows as a result of inflammatory diseases of the respiratory tract; thus the standard quantity of urine is enhanced by the judicious use of Glyco-heroin. In the case of tuberculosis it acts not only as a respiratory sedative, but also as a stimulating expectorant, as the following case will attest:

Case I.—*Pulmonary tuberculosis, stage of cavities.*—W. B. C., aged 28 years, suffering from cough, expectoration,

emaciation, loss of appetite, loss of sleep, inability to lie in certain positions, of eight years' duration, weight 122 pounds. Physical examination revealed a number of cavities in both lungs, although the laboratory tests did not show any tubercle bacilli. Guaiacol, arsenic, eucalyptus, ichthyol, and creosote benefited him but imaginatively. Glyco-heroin in doses of one teaspoonful every two hours, to start with, to be taken from 8 a.m. to 6 p.m., benefited him to such a degree that, to quote from his letter to me, he "gained four pounds in four weeks." Lungs appear to take on a better action as regards respiration, thus giving him, indirectly, proper sleep, followed by the ability to eat with a relish. Coughs little at night; advised him to expectorate forcibly during day. Patient now finds relief by taking his doses every eight hours.

Now, why this beneficial action in tubercular disease, for this case was taken at random from my case-book, as are all the other cases? Simply because Glyco-heroin loosens cough, promotes the throwing off of the noxious material from the lung cavities, and thus gives relief, breathing becomes easy, oxygenation takes place with renewed vigor, and, by careful attention as regards regulation of dosage, patients of this class may live many years in comparative comfort as regards distressful symptoms.

Case II.—*Acute laryngitis.*—George F. N., aged 14 years. coasting, perspiration, and no overcoat, a good combination to bring on an acutely inflamed laryngeal mucous membrane. Pain on swallowing, talks in whispers, temperature 101.5 deg. F., pulse 135, respiration 23, cough, barking like dog, uncomplicated case of laryngeal inflammation. Stokes' expectorant did not relieve, seemed to increase cough. Glyco-heroin, full doses of one teaspoonful every three hours, while producing much sleepiness, reduced inflammation, cough, and pain in three days. I then combined it with squills and syrup balsam tolu, to be given every four hours until completely relieved.

Glyco-heroin, in cases of laryngitis, seems to me to take the place of all heretofore vaunted sure cures, without reservation. Vomiting from the use of opium, morphine, codeine, etc., always delays a cure in cases of laryngitis; not so with Glyco-heroin, which in my hands thus far has not produced vomiting.

Case III.—*Chronic bronchitis, asthma, and emphysema.*—Mrs. H. D., aged 44, has had asthmatic attacks, every fall and spring, for the past eleven years; not in winter, but only at the beginning and end of seasons. Iodines, senaga, squills, digi-

talis, and cupping gave relief, but with the penalty of a return of more severe attacks. Dyspnea, cough and expectoration in this case was something frightful to witness. In this case, prompt hypodermic injection of 1-8 grain of morphia relieved somewhat, followed by the use of Glyco-heroin, one teaspoonful every hour for three hours, then every four hours, and on the third day every six hours. In this case the Glyco-heroin seemed to continue the effect of the morphia.

A new point in favor of Glyco-heroin is that it enhances the effect of morphia when given hypodermically. Although in seven other cases of asthma, with attacks similar to the above, Glyco-heroin was administered, in two-hourly doses, with the remarkable effect that the cough and dyspnea ceased within four hours.

Case IV.—*Pharyngitis.*—Miss D. F., aged 17 years, complained of fever, hoarseness, cough, and soreness in throat. Culture of reddened throat did not reveal any streptococci or Klebs-Lœffler bacilli. Glyco-heroin, given every three hours, cured in two days. The after-cough was removed in four more days, by the administration of Glyco-heroin in doses of one teaspoonful every six hours.

Case V.—*Acute bronchitis.*—Carl F., aged 22 years; chills, fever, soreness of throat, pain on swallowing; cough dry, no expectoration; Glyco-heroin, one teaspoonful every two hours, promoted expectoration, changed the character of the cough, and gave relief in a most happy manner. In my opinion there is no doubt that patient would have ended up in a pneumonia, unless he was relieved inside of 48 hours. As regards his cough, character of it was so completely changed that the bronchial disease seemed to "flow from him," as it were.

In whooping cough, 22 cases from my case-book show that I prescribed Glyco-heroin with permanent and speedy results, given in doses of five and ten drops, as indicated, to these little sufferers. It seemed to be borne well and efficaciously. Readers do not care much for the recital of cases; bare facts are meat from which all can subsist with profit. Glyco-heroin (Smith) is far superior to codeine, as sedative, in affections where a direct action upon the respiratory centre is looked for. For, certainly, its action must be direct where it is noted that respiration is deepened and prolonged. No vomiting, no nausea, no headache, no depressing of powers of mind or body, no untoward symptoms. Glyco-heroin is *par excellence* the remedy for conditions affecting the respiratory organs, whether in children or adults, in the weakly and in the strong.

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Original Communications.

THE TREATMENT OF CYSTITIS.*

BY HOWARD A. KELLY, M.D.,

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Miscere utile cum dulci, to impart useful information in an entertaining manner in general addresses of the character I am asked to deliver, seems to be a custom as old as, and closely akin to, the use of excipients to carry a drug which is not pleasing if taken in its naked strength. Who does not recall with pleasure the "elegant mixtures," the electuaries, and the compound syrups of our forefathers?

I have tried to meet your expectations, by bringing before this large audience, representative of the advanced medical thought of our day, one of the oldest and most rebellious of the enemies of our race, namely, cystitis, bound in chains; and I trust that you will find no small satisfaction as you note that one more step has thus been taken in the path of therapeutic progress.

The *résumé* I shall give you embraces over eighteen years of a personal experience, largely devoted to this particular subject.

In order not to raise too great expectations, let me declare at the outset that, as is often the case in that difficult art which we profess, I have no single drug or method to propose by which all cases can be cured. It is only by a painstaking study of all the conditions, and by persistent patient efforts that cystitis can be

* Read before meeting of Canadian Medical Association, Halifax, Aug. 22, 1905.

understood and successfully combated. The therapeutic side of the subject, in which your interest naturally focuses, is so large that I cannot do more than touch upon its history, etiology, pathology, chemical history, and diagnosis.

History.

The names of two of our great fellow-countrymen stand preëminent in the history of the treatment of cystitis, and to them alone will I refer in this brief *résumé,* as they are in danger of being passed over in the hurry which characterizes the progress of to-day. One of these is Willard Parker, of New York, who, in 1850, at the Bellevue Hospital, operated upon a case of chronic cystitis in the male, stating that, "The object in view is to open a channel by which the urine could drain off as fast as secreted, and thus afford rest to the bladder, the first essential indication in the treatment of inflammation." This case was reported in the *New York Medical Journal* for July, 1851.

The other name is that of T. A. Emmet, who, in 1858, operated for a vesical calculus, and by the advice of Marion Sims, left an opening in the vesico-vaginal septum, in order to afford greater facility in the treatment designed to restore the organ to a healthy state. Subsequently to this, Emmet "made an artificial vesico-vaginal fistula, with a view of giving rest to the organ by the free escape of urine." (*Amer. Pract.,* for Feb., 1872.) Emmet records several cases of cystitis treated by this plan in his classical work on vesico-vaginal fistula, published in 1868, while Parker also presented at the New York State Medical Society, in 1867, a paper on "Cystitis and Rupture of the Bladder Treated by Cystotomy."

One of Emmet's most rebellious cases, a woman who had suffered for three years, was examined "endoscopically," after cystotomy and irrigations of the bladder, by Dr. Newman, June 1st, 1869, and the bladder found free from disease, whereupon Emmet closed the fistula, and with some further slight treatments, she fully recovered.

I mention these facts, because I am sure we are too prone to forget the skilful labors of our predecessors, upon which all that we are successful in doing to-day rests as a sure foundation. All honor to these noble painstaking pioneers in this most difficult corner of our field of labor.

Etiology.

Again, I turn with no little pleasure to our clear-sighted Emmet, who, writing in 1872, says: "Neglect during labor to keep the bladder empty, exposure to cold, violence, and the habit

of long retaining the urine, are the chief exciting causes of the most serious forms of cystitis." In investigating this, as in other inflammatory affections, we have to consider two factors—the predisposing causes which prepare the ground for the cystitis, to which we have but little to add to what Emmet has said; and the exciting cause, the particular living organism, which is the immediate agent in setting up and in maintaining the disease. It is the establishment of this last important factor which has given us a new conception of the subject, and served to modify and direct our treatments.

Contrary to the opinions of some ten years ago, we now know that the mere presence of organisms is not of itself sufficient to excite a cystitis. This is seen in cases of bacteriuria, where although the urine is loaded with organisms, there is but a nominal lesion, or no lesion at all, in the bladder.

The following predisposing factors are important :

1. Localized congestion.
2. Traumatism.
3. Retention of urine.
4. Reduced health.
5. Two or more of these factors combined.

Congestion may result from "catching cold" and from exposure; or from the action of toxins or chemical irritants, excreted by the kidneys, on the bladder; or from a hyperacidity of the urine; or, again, from the presence of tumors in the pelvis.

Traumatisms arise from labor, especially where the forceps are used with the bladder not emptied; from the use of the catheter; and, most important, from surgical operations on the uterus, involving the detachment of the bladder; and from stones lodged in the bladder.

Retention of the urine from faulty innervation of the bladder, as in tabes or after labor, and retention from a sense of modesty followed by the use of the catheter is a prolific cause.

Ill-health renders the whole body liable to the invasion of organisms, and coupled with any of the preceding factors renders the bladder a *locus minimae resistentiae.*

What are the organisms, then, which serve, in the presence of such predisposing conditions, to bring about and maintain a cystitis?

To answer this question I turn to an admirable summary of my own cases, made by Dr. T. R. Brown, and published in the Johns Hopkins Hospital Reports, Vol. X., Nos. 1 and 2, for 1904.

There were twenty-five cases of acute cystitis, which revealed the presence of—

B. coli communis	15 times
Staph. pyogenes albus	5 "
Staph. pyog. aureus	2 "
B. pyocyaneus	1 time
B. typhosus	1 "
Proteus vulg.	1 "

And in 22 cases of chronic cystitis, Dr. Brown found—

B. coli communis	11 times
Staphyloc. pyogenes aureus	3 "
" " albus	2 "
B. coli communis (with tub. bac.)	1 time
Unidentified (possibly a variety of B. coli)	1 "
Pyuria sterile	2 times
A staphyloc. albus (which, decomposed in urea, was pyogenic, but either did not liquefy gelatine or did so extremely slowly)	2 "

There were also six cases of tuberculous cystitis.

Compare these findings with those of Melchior, and you will find the similarity is in some respects a striking one. (Kopenhagen, 1893.)

Melchior examined 36 cases of cystitis (17 women) and found—

B. coli communis	25—17	pure cultures.
Streptococ. pyogenes	5— 3	"
Proteus Hauser	4— 1	"
B. tuberculosis	3— 2	"
Diplococ. ureæ liquef.	3— 2	"
Staphyloc. " " Lundstrom	3— 1	"
Streptobac. anthracoides	3	"
Gonococ. Neisser	1	"
B. typhus	1	"

The great importance to be attached to a study of the etiology of cystitis is the discovery of several factors easily within our control, notably the traumata. By recognizing this fact we can do much, in many instances, to prevent a cystitis.

The most important group opened up by bacteriological study of the urine is that of the tubercular cases, which, as a rule, call for the more aggressive plans of treatment.

I will pass over the pathology, simply noting two important facts which bear powerfully on the treatment of cystitis.

First, that the disease is sometimes purely superficial, being seated only in the mucosa, while at other times it extends deep down, even into the muscularis.

Second, the disease is often localized in a few well-defined patches; it is rarely universal.

The following clinical forms may be recognized, apart from the determination of the infecting organism or organisms:

1. Catarrhal, involving the superficial mucosa.
2. Desquamative.
3. Ulcerative.
4. Granular.
5. Papillary.
6. Bullous edema.

The important divisions of cystitis into acute and chronic separate the cases according to duration and intensity of symptoms.

Diagnosis.

A diagnosis of cystitis may be made when pus is found in the urine, in association with an inflamed area in the bladder; it may be inferred by such symptoms as pain and frequent urination, and established by a direct visual examination of the interior of the bladder.

A persistent, acid pyuria, which does not yield any organisms on the ordinary media, should always excite suspicion of tuberculosis. The best way to settle the point, if the tubercle bacilli cannot be found, is to inoculate a guinea-pig with the sediment, injecting it either into the peritoneum or under the skin.

I must bear in mind that my remarks may fall into the hands of some busy practitioners who find it hard to get time to use the microscope. I would, therefore, utter the caution not to mistake a pollakiuria (frequent urination) for a cystitis. In my experience this has often been done, and then the active measures of treatment instituted have converted the innocent but annoying disease into a dangerous one.

Again, a dysuria from hyperacidity of the urine is likely to be mistaken for a true cystitis, unless some other test than the subjective symptoms is applied.

Yet another caution: a little affection in the vesical trigonum, by the intensity of the symptoms it provokes, may hide a much graver and more advanced latent affection in one of the kidneys.

The diagnosis, to be sure and satisfactory, should ascertain not only the existence of a cystitis, but its extent as well.

A diagnosis which begins and ends with the word "cystitis" is as accurate as the statement that a patient has thoracic disease.

Again, even though the nature of the infecting organism is determined, the diagnosis is still no more accurate than it would be to say that the patient has pulmonary tuberculosis. In the latter case you see readily enough how vital are the questions,

Where is the disease located? and, How extensive is it? Apply like questions to the bladder.

Let the man who is willing to go carefully into his cases rest his diagnosis on these factors:

1. History, including symptomatology.
2. Examinations of the urine, microscopic and bacteriologic.
3. Direct inspection of the interior of the bladder.

I cannot urge too forcibly the ease with which the examination is made through the open cystoscope, without any intervening medium of lenses or water; nor can I sufficiently declare the importance of the results thus obtained, in clearing up and giving precision to the diagnosis.

With such examinations, cases of "bacteriuria" become much rarer, as some infection of the vesical mucosa is almost always found, even though there is a remarkable disproportion between the local disease and the numbers of the bacteria.

Treatment.

I am especially glad to address you on the subject of the treatment of cystitis, as I have now had an experience of over five hundred cases, which have been carefully collated from my records by Dr. G. J. Campbell, of this city.

I think we have gone as far as we can under existing conditions, and must now await some fresh and important discovery before changing our present methods materially; and when the specialist feels that he has pretty well threshed a subject out, it is time to hand his work over to the general practitioner, to see how much of it the latter is ready and able to appropriate.

Three important factors enter into the successful treatment of cystitis:

1. A full, carefully written analysis of the case, including a description of the lesions seen in the bladder.
2. A well-defined campaign against the disease, progressive in character.
3. Untiring patience.

All preliminary discussions as to history, etiology, and pathology lead up to the two great practical issues: How to prevent the disease, and How to get rid of it.

Prophylaxis.—I am convinced that if we pay closer attention to prophylaxis there will be a prompt and a large reduction in the cases of cystitis. Many of the cases seen nowadays follow some abdominal surgical operation.

A potent factor in the prophylaxis is the proper use of the catheter, which I may summarize as follows:

A sterilized catheter; cleansing of the external genitalia and

urethral orifice before introduction; introduction of the catheter without touching the end introduced.

The bladder must not be permitted to become over-distended.

It is also important to remember that a patient, unaccustomed to urinating when lying on her back, often empties the bladder very imperfectly. If the urine tends to stagnate in the bladder, some warm boric acid solution should be thrown in to wash it out every time the catheter is used.

In abdominal hysterectomies, the bladder should be rubbed, touched, and bruised as little as possible. I have looked into the bladder after a hysterectomy for myomata, and seen large transverse striæ of submucous hemorrhages on the posterior wall.

In another case, in which I recently reopened the abdominal wound, the bruised bladder was at first mistaken for a large, fresh blood clot.

Further, where there is reason to fear cystitis, and always when the catheter is used, it is well to give urotropin for a few days, in 5 or 10 gr. doses t. d., as a prophylactic. The consensus is that cystitis will but rarely occur if this precaution is taken.

Remove the Obvious Cause.—The sister of one of our ablest practitioners got up from her lying-in bed with a bad cystitis, which numerous treatments failed to ameliorate in the least degree.

She entered my cystoscopic room for the first time; I put her in the knee-chest posture and looked into the bladder, and, lo! there was a white calculus as big as a pigeon's egg lying in the vertex. With the removal of the calculus she made a prompt recovery.

Take nothing for granted; if you can look at a sore throat, you can also, with a reflected light and the small amount of patience necessary to acquire a little more dexterity, look into an inflamed bladder.

Make also a searching examination of every contiguous pelvic organ. If there is a large myoma, or an ovarian tumor, or a pelvic inflammatory mass pressing on the bladder and interfering with its proper evacuation, take the tumor or the mass out.

In the case of another patient with a bad pyuria, whose kidney was about to be taken out, I found a small suppurating dermoid cyst opening into the bladder by a sinus; the removal of the tumor and the closure of the orifice cured the disease and saved her from a serious mutilation.

In any obstinate case, especially if it is one of lesser degree, always remember that the source of constant reinfection may reside above, in the pelvis of the kidney. If you find tubercle bacilli associated with a cystitis you may be sure that in nineteen cases out of twenty the primary focus is in the kidney.

As we consider the active treatment of a cystitis, let me urge two important factors, which serve as controls in testing progress towards recovery:

1. A careful preliminary examination and description of the local condition, as seen through the speculum, on the interior of the hollow vesical sphere. If there is any marked improvement, examinations from time to time will show it by the variations in color of the mucosa and in the extent of the lesions.

2. The taking of a measured quantity of fresh urine, say three platinum loops, spreading this on the slant agar, and then counting the colonies which grow out, as a means of testing the reduction of the amount of infection. These individual foci will often be found to diminish progressively, from countless to discrete, from, perhaps, 100 to 15, or 20 to 2 or 3, to finally none at all. Several sterile cultures ought to be secured before the case is considered free of all risk of relapse.

Let us now consider our resources in dealing with a particular case. They are: Rest and dietetic treatment, medicines by the mouth, injections into bladder, direct topical treatments of the vesical walls, surgical treatment, including incision of the bladder, and excision of the disease area.

Rest in bed is of the most importance. I can always do far better for a case if I can get her into my hospital, where she has rest associated with regulated diet, tonics, the due regulation of the bowels, massage, and baths.

Medication by the Mouth.—Large quantities of bland water is a valuable remedy here, as in pyelitis. The virtue, I think, in the various lauded waters resides in the pure *aqua potablis* which they contain, and not in the various salts shown in the analysis. Some patients will take, however, with better grace, three or four pints daily of a water which is imported in a big bottle with a sounding name, than the simple, but equally efficacious spring water from a home source. It is the old tale of the bread pill and the placebo.

Urotropin in 5 to 10 gr. doses is of value in the more recent cases.

The citrate of potash is valuable where the urine is too acid, while boric acid is of use to correct an alkaline urine.

There is some advantage in reversing the chemical reaction of the urine under which the organisms are flourishing, though not so great as one would have anticipated.

Cantharadin has been used by Freudenberg with the greatest benefit in a series of 56 cases, curing 32 rapidly. The formula is Canth. (Merck), 0.001 in 1.0 alcohol, dissolved in 100 water. Take three or four times a day, teaspoonful doses.

I use also fluid extract of corn silk (Zea mais) in teaspoonful doses, with advantage in the amelioration of the symptoms.

Irrigations form, perhaps, the most important means of treatment at our command, and with irrigation it is well to combine distention of the bladder.

The simple daily cleansing of the bladder in this way is of the utmost value, and many cases would recover rapidly, if only bland fluids were used.

The two most efficient drugs for this purpose are the nitrate of silver, 1:1500 to 1:500 or stronger, and mercuric sublimate, 1:1000.

As good a plan of administration as any is to connect a rubber tube with a funnel attachment to the catheter, and then slowly elevate the funnel two or three feet above the level of the pelvis. By the amount borne and the height, the progress of the more difficult cases towards recovery can be pretty well estimated. The quality of great importance here for both patient and practitioner is patience. It sometimes takes weeks or months to secure the first decided step in advance, with many apparent back-sets in the interim.

I must confess to you right here that in several of my cases, which we have worked over for one, or two, or even more years, securing a recovery in the end, I should never have had the courage to persevere had it not been for the unflagging interest and zeal of Miss Cook, my chief nurse, who has personally conducted almost all of the treatments.

Direct Topical Treatments.—When a cystitis is in the chronic stage, and is, furthermore, localized in a small area in the bladder, one, for example, which could be covered by the last joint of the thumb, direct topical treatments often hasten the improvement and even effect a cure. The bladder is emptied and the patient put in the knee-chest posture, then through an open cystoscope, using a head mirror or other suitable illuminant, the patch of inflammation is exposed and treated just as a chronic sore throat is handled, making a direct strong application by means of an applicator and a pledget of cotton. Nitrate of silver is best here, too, used over a small area, as strong as 50 p.c. For larger areas use 10 or 5 p.c., taking care that there is no excess of the solution to run down over the sound mucosa. I also use freely a 50 p.c. solution of argyrol. Subsequent treatments must be milder, and at intervals of from three to seven days. Solutions of 1 and 2 p.c. are often valuable in trigonal inflammation (trigonitis).

An admirable and effective combination is formed by associating occasional topical treatments with daily injections and distentions.

Surgical Treatment of Cystitis.—It is in the surgical treatment of cystitis that the greatest difference is found between our practice and that of our immediate predecessors, of even a decade ago. And it is here that I have some fresh additions to make, in the description of methods which have brought some utterly rebellious cases entirely within the scope of successful treatment.

There are two kinds of vesical surgery, minor and major.

Minor cystic surgery consists in the use of a sharp or serrated curette, or a wire brush, or a bunch of fine wire needles. I expected great help from these instruments when I began to use them, but I must confess to disappointment in the issue. The tissue removed is of value in differentiating a tubercular bladder, but I cannot see that the recovery is hastened, while harm may be done, as Sampson has shown, if the ureteral orifices are injured, by favoring an ascending infection.

Major Surgery.—When I receive a case of intense vesical inflammation, where all local treatments, even the mildest, are impossible on account of the pain produced, I, without loss of time, resort to major surgery, and propose, at the outset, to put the bladder at rest by making the Parker-Emmet incision, in order to secure good continuous drainage. I do this in a few seconds, often by putting the patient in the knee-chest posture and letting air into the bladder through the urethra; then lifting up the perineum the anterior vaginal wall is exposed and lifted a little on a pair of curved artery forceps, introduced through the urethra and slightly opened. A knife is plunged through the septum at this point, and the opening enlarged fore and aft until it is at least an inch long. I wipe out the bladder thoroughly with dry gauze, and sew the vesical mucosa to the vaginal at about six points, to prevent too rapid closure of the wound. All this takes about the same time to do as it does to describe the operation.

Such an opening ought to be left, as a rule, for from three to six months. The bladder and vagina should be irrigated every day either *per urethram,* if not too sensitive, or *per vaginam.* A continuous daily hot water bath, as recommended by Hunner, leaving the patient immersed for hours, is a most valuable adjuvant in the worst cases. In due time the bladder will be found to have cleared up, perhaps wholly, when the fistula is closed, and the patient discharged. On the other hand, many cases clear up only to a certain point and go no further, and of these I wish to speak somewhat particularly, for this is that large residual group of our worst cases of cystitis, generally looked upon as hopeless.

Let me briefly outline the treatment of such a case. In the

first place, given one of these intensely inflamed old cases of cystitis in a patient worn out with vigils and suffering, mild courses of treatment are worse than useless, serving only to increase the distress. To avoid discouragement, tell the patient, who has suffered for years, that she must be content to give a few months or, perhaps, a year or more to getting well. Then begin by opening and draining the bladder, then when you find the organ cleared up to one spot, you may try for a few weeks to heal that by direct applications of nitrate of silver or argyrol, and in this you may succeed. If you fail and there is a tendency to relapse, make a suprapubic opening and cut out a crescentic piece, including the entire thickness of the bladder wall, and sew it up with catgut sutures on the inside and fine silk on the outer surface.

If you have to open the peritoneal cavity, and the bladder is a foul one, you can sequestrate the entire vesical region by suturing the round ligaments and the uterus to the abdominal wall from side to side, converting the peritoneal cavity behind the symphysis into a closed pouch, which is then drained over the symphysis. In a bad case which I treated in this way and had to open later for an ovarian trouble, there was no trace of the pouch left.

I have not found great help from the making of a small suprapubic opening in association with a vaginal opening for through and through drainage. If, however, worst comes to worst, I would make a big suprapubic opening, partially detach the recti, and put the patient in the hot tub for as many hours daily as she can stand.

Let me illustrate this group of difficult cases by giving you a brief outline history of seven of my patients. In two the disease was tuberculous, in the others the organism was a colon bacillus.

Case 1.—Mrs. R., aged 55, came to me in October, 1899, with a chronic cystitis, which had persisted for fourteen years in spite of being several times "cured." I found the entire vesical mucosa covered with scattered foci of ulceration pouring out a curdy pus. The urine was alkaline, containing a short organism, probably the bacillus colon.

She received under my care the following treatments: A borax and soda solution by irrigations, applications of the nitrate of silver (2 to 4 p.c.), insufflations of boric acid powder against the diseased vesical wall, formalin irrigations (1:15000 to 1:2000), irrigations of silver nitrate from ½ to 1 p.c. strength.

Under these treatments there was a steady improvement, the organisms decreased, and the capacity of the bladder increased from 60 to 280 c.c. She was cured in forty-one days. I tested

the efficiency of the treatment by making cultures on several successive occasions and noting that there was no growth. So since this cure there has been no relapse.

Case 2.—Miss J. MacD., aged 33, came to me in 1899 suffering from frequent urinations with a slight pyuria and hematuria.

Examinations showed an area of intense cystitis at the vesical vertex; as she had suffered for four years I proceeded at once to surgery and opened the abdomen, excising an ulcerated area of the bladder at the vertex 3 x 2½ x 1½ cm. in size. This was closed without drainage, using sixteen catgut sutures in the first, and ten in the second layer. She recovered at once and has been in the best of health ever since.

The pathological examination of the greatly hypertrophied bladder wall showed granulation tissue and inflammatory infiltration.

Case 3.—Miss J. R., aged 29, came to me in March, 1900. She had been suffering with her bladder for five years. It is probable that the frightful cystitis from which she suffered was induced by catheterization in a hyperacid bladder in a nervous woman. She was in a wretched mental state from the suffering night and day, emptying her bladder every few minutes.

The urine was full of pus and contained blood; cultures showed that the infectious organism was the colon bacillus.

Cystoscopically, the bladder was of an intense angry red color, with extensive areas of ulceration; there was not even a small area of sound tissue seen at any point. She simply screamed whenever she was touched.

She was about three years under treatment, and her recovery is largely due to the untiring efforts of my chief nurse.

The following treatments were used:

1. Curettage and the use of the wire brush over the whole inner surface of the bladder, followed by a 10 p.c. solution of silver nitrate.

2. Fourteen days later another curettage.

3. Ten days later I was able to catheterize the left kidney and demonstrate a left pyonephrosis, which was opened and drained. At the same time a suprapubic cystotomy was done to facilitate irrigating the sensitive bladder. I left a mushroom catheter in the kidney wound and a ureteral catheter in the ureter, to facilitate washing out the kidney.

4. Dilatation of the renal and suprapubic openings.

5. Left nephrectomy (intracapsular enucleation) by morcellation. Closure of the suprapubic opening.

6. Plastic operation narrowing the urethra, which had been overstretched before she came to me.

7. Plastic operation repeated.

The bladder was so small when I began to treat her that she could not hold as much as 10 c.c. of fluid, and even under extreme anesthesia she strained and forced the fluid out if more was thrown in.

During all the time of the above treatments she received 135 irrigations of either boric acid or silver nitrate with boric acid.

Under this regimen the bladder recovered its capacity and normal appearance. To-day she is in perfect health and suffers no pain. The only remaining discomfort is that she urinates often, and this I have been unable to overcome, although I can now put 400 c.c. into her bladder.

Case 4.—Miss C. P., aged 52, came to me in October, 1902. I saw her first in bed, a hopeless invalid, in intense pain, with spasmodic exacerbations day and night. I never saw a sadder picture. She lay moaning like a suffering animal in a constant state of apprehension of pain, and screamed when the vagina was touched, even for the purpose of making the gentlest examination. The entire bladder was the seat of intense inflammation and ulcerations from the vertex to the left ureter. Its capacity was two-thirds of an ounce (20 c.c.).

She has made a perfect recovery and has remained well, under the following treatments:

1. October, 1902, a vesico-vaginal fistula was made for drainage.

2. November, 1902, a suprapubic fistula was made to wash through and through; at the same time I enlarged the vesico-vaginal fistula. A plastic operation was necessary to open the vulvar orifice, which acted like a sphincter, retaining the foul urine in the vagina and bladder.

3. January, 1903, dilatation of suprapubic fistula with Hegar's dilators and introduction of a self-retaining catheter.

4. February, 1903, left nephroureterectomy, removing a tubercular kidney and ureter.

5. April, 1903, closure of the vesico-vaginal fistula.

Irrigations of a half-saturated solution of boric acid were given from one to six hours daily, amounting in all to 1,000 hours of treatment.

The result has been an absolute recovery, and she is now stout, robust and able to attend to all her household duties in town and country.

Case 5.—Miss L. M., aged 24, came to me in January, 1900. She had had a vesico-vaginal fistula made to drain an intensely inflamed bladder three years before.

After trying various palliative measures, I opened the bladder above the pubis, trimmed off numerous granulations from the posterior vesical wall, and then drained the bladder with iodoform gauze.

In November, 1902, I excised the entire diseased area, including all the bladder wall, removing a triangular area from the vertex to the base of the bladder 1 cm. in thickness, and closing the opening with interrupted catgut sutures tied within the bladder. This is the case in which the whole bladder area was excluded from the peritoneal cavity by sewing the round ligaments and fundus of the uterus to the anterior abdominal wall. (See *Johns Hopkins Bulletin,* 1903, p. 96.)

All of the disease was not removed at this time, and I had subsequently, on account of repeated hemorrhages, to open the bladder again (November, 1903), and excise three pieces, one in front, one at the vertex, and one at the posterior wall.

The wounds were again closed with interrupted catgut sutures tied on the inside of the bladder. It was wonderful to see how little traces were left of the sequestration operation; there were only a few adhesions between the bladder and the tubes and ovaries.

Remarkable features in this case were, first, the fact that giant cells were found in the tissues excised, when we had been utterly unable to discover any tubercle bacilli in curettages or in the urine, examined repeatedly over periods of months' duration; second, that the disease was primary and confined to the bladder as far as the urinary organs were concerned; there was no renal disease.

Case 7.—Mrs. H. M., aged 34, came to me in May, 1901. She was an utter wreck from nine years of suffering, extremely emaciated, and abandoned to die of an advanced tuberculosis of both kidneys and bladder. The bladder was ulcerated from vertex to urethral orifice and there was not a sound spot to be seen.

I began, May 4th, by draining the bladder by the vagina and giving rest from the constant suffering.

May 18th, a left nephrotomy was done.

June 15th, left nephrectomy and a ureterectomy as far as the pelvic brim.

October 14th, closure of the vesico-vaginal fistula.

October 22nd, 1902, extirpation of the lower end of the ureter.

February 24th, 1903, suprapubic resection of the bladder, taking away about one-half of the bladder, including the left ureteral orifice.

April 9th, 1903, closure of the vesico-vaginal fistula.

With these surgical measures were associated irrigation and distention treatments, as well as topical treatments with silver nitrate.

From holding nothing at all, the bladder has increased to an almost normal capacity, in spite of the extensive resection; in October, 1903, it held 225 c.c.

She is now practically a well woman, stout, hearty, and attending to all manner of household and social duties.

I trust, in conclusion, gentlemen, that I have demonstrated that, granted the important elements, skill and patience, practically all cases of cystitis, even the worst, can be cured.

The first important step is to make a correct diagnosis, so as to treat as a cystitis a case of irritable bladder.

The next step is to determine the grade of the disease and the character of the infection, and, most important, to differentiate tuberculosis.

Again, the kidney must be borne in mind as a possible source of reinfection in cases very slow to clear up.

After a thorough study of the field, begin an aggressive, well-defined campaign on the lines indicated, which shall be sustained in a progressive manner until the patient is cured.

CATARACT AND OPTIC NERVE ATROPHY.

By JOHN P. MORTON, M.B., L.R.C.P., Hamilton.

Miss R. S— called me in to treat her ears. After I had finished the treatment, she asked me if I thought anything might be done for her eyes, as she was blind.

She gave me the following history: "When I was two years old a sharp-pointed stick ran into my left eye, and some of the fluid ran out. Dr. Nettleship, of London, England, treated me. About two years after this accident I began to lose the sight of my right eye, and in a short time I couldn't see at all. I was taken to Australia by my sister, and then sent to my brother in Canada, and through him I was put into the Brantford Institute for Blind. I am now thirty-two years old, and have been examined by seven or eight specialists, and they have all said to me, without reserve, that an operation on the right eye would be useless."

Examination showed the left eye to be atrophied and aneurotic. The right eye had a mature cataract, and by examination with a sixteen-candle-power lamp had neither perception or projection of light. She said that sometimes she thought she saw light, and wished to know if there was a chance in a thousand of getting any sight by removing the cataract. I told her it would do no good, but her importunity was such that I finally agreed to remove the cataract, and this I did at Hamilton General Hospital. The cataract came out nicely, but the patient immediately afterwards said she could not see light, and of course this was the result I expected. The eye healed quickly. During the two following months she was frequently brought to my office, and she thought she was gradually "commencing to see." I told her to hold certain objects in a good light and study them with her eyes while she handled them.

Although it is difficult of explanation, my patient gradually regained her vision, until it reached $\frac{6}{36}$ with + 9 D. Sp., 3 + 3.5 D. Cyl. axis horizontal. She is now working, and has written me several letters.

The results in this case are very surprising and undoubtedly contrary to what the classic tests in regard to light projection and light perception would allow us to expect.

Two years after the injury, and with the left eye in a condition of phthisis bilbi, there commenced in the right eye an

optic neuritis, and probably a sympathetic plastic iritis, as indicated by some posterior synechiæ; following this the lens gradually became cataractous. The optic nerve was not completely destroyed, but either the optic nerve or the occipital centres forgot their functions so far as not to answer to an electric light. Even after the cataract was removed, perception and projection of light were absent. With the light striking again directly on the fundus, the nerve and occipital centres seemed gradually to resume their functions.

Remembering this case, we should be more backward in advising against cataract removal when the projection and perception tests give negative results. This seems to me an important case, as it apparently upsets these two classical tests which we always apply before operation for removal of cataract.

Perhaps the explanation lies in the early age at which the sympathetic optic neuritis arose, there remaining a considerable period of development after this injury to the nerve. This newly developed nerve tissue never experienced the light, except in so far as this traversed the cataract, and had to learn its function after the extraction. Perhaps the occipital centres would have the same experience to go through.

MEDICAL THOUGHTS, FACTS AND FANCIES.*

By JAMES S. SPRAGUE, M.D., Stirling, Ont.

A patient tells me she was attended in her confinement by a Miss Dr. ——, resident fourteen miles distant from her. The doctor's fee was munificent—being five dollars. From what I learn, from good authority, no liveryman in Dr. ——'s city will personally drive his own horse and lose thirteen hours' time away from his stables unless he secures a larger amount of money than our confrere in the next city. Comment is unnecessary when such work is being done throughout Ontario, and we suffer for the thoughtless acts of our brothers and *sisters* in medicine. And the worst feature is the pronounced injury to the profession.

Osler warns us not to give expression to our complaints, yet I consider it advisable to air them now and then, for as a rule we are apt to run in very shallow grooves of thought, which, too, are very erroneous and delusive, and occasion fossilization antagonistic to research and study, so much remarked in these progressive times, even when error, false guides, even sciolists, are bewildering the thoughts of the very elect in medicine.

I have often wondered why the highest dignitaries in our profession, even the professors, did not give us more light from their lanterns—mental lights. By such I do not refer to the disgraceful testimonials which now and then, yes, too often, are seen in medical journals, advertising their names and marking commercialism on the temples of Hippocrates. Medicine, unlike divinity, or the creeds of churches, or the law, freed from the shackles of monasticism, superstition, and other impeding conditions of time and circumstances, demands the exposition, by our best men, of their successful researches, so that we, many years in practice, can keep up to and with the thinking of the giant minds.

A matured man—in life, in judgment, and in medicine—told me recently that of his many mistakes the one most grievous and really irreconcilable is that made once, several years ago, when he, in a very brief spell of insanity or of supposed kindly feeling in heart, recommended an only son—selfish and narrow-minded—the only son of a noted cut-throat, schemer, blackguard, rich and out-and-out mean man—although among his list of patrons—to study medicine. Moral: The best men—the ideal men in medicine—have not

* Read not to criticize, but to consider, to adopt, to confirm, or to reject.

had brutes for parents, even if the parents, to cover their sins and to establish family respectability, spent tainted money for the son's M.D. degree.

If more attention was directed to the study of the fathers in medicine, and of the inspirations exercised and aroused by them, we would form ideals of much more excellency and devotion, worth reverence by us, with such an illustrious heritage, dating with no uncertain landmarks in history through the ages, even from demi-gods, and to the very gods themselves. Imbued with such teachings, our young men would soon bring our profession, although so highly honored among men, to such exalted levels as existed when Athens was in its literary glory.

Several M.D.'s, yet young men, whom I know, will curse and forever curse medicine. A few of them are yet in the profession, and others abandoned it, at times when becoming really useful, actually safe men in practice. What is the cause of this malediction, this relinquishment, this indifference to practice? Such is attributable to the fact that these misguided brothers, flattered and patronized during their first five years in practice, foolishly concluded that caressing and patronage were due them by their merits, and the fruits of their best efforts went to build a house—no common one—*actually on a bed of sand,* so fickle is patronage and the littleness of friendship so characteristic of our people.

I am of the opinion, judging from several observations, that there are very few villages or towns of any importance in Canada or the Eastern States that cannot show one or more *abandoned-hopes* residences, erected by M.D.'s in the first ten years in practice—no longer occupied by them or owned by them. In one Canadian village, whose population never reached 1,500, any old citizen can show you four abandoned castles, built by doctors, who do not live in them or own them. How illustrative is the doctor's life, in small communities, of these lines:

> "Friendship often ends in love,
> But love in friendship never."

A wise country doctor, a friend of over half a century, was wise enough to secure fifty acres of land near his village. He there built a castle. Assailed more than once by new arrivals, and sometimes sorely besieged, he cannot be dislodged as long as seed time and harvest continue. Here is a good lesson.

No greater blot on medicine is there than the unregenerated scion of an unregenerated parentage, who claims M.D. to his

name. He is in the profession for its spoils, its wreckages. His ribs fatten with the cries of the misfortunates who unfortunately secure his services. The kindly feelings which warmed the bosoms of the venerable ones in our history of ministering to the poor and helpless are unknown to him, and will ever be unknown. It takes the life-work of the most venerable man in medicine to even overcome the injury to medical progress done by such undesirable ones in our ranks.

I am of the opinion that in time the State government shall be the referee of those who want to engage in medical studies, in fact, adopt such rulings as pertain to the selection of candidates for the West Point Military Academy in the United States. If so, then the heavens will shine on medicine. But before such regulations be adopted, it is desirable that candidates be made perfect, actually purified, by classical studies. If possible such influences can ennoble and eradicate hereditary meanness of character and disposition, before the divine studies in medicine be commenced. For the noblest class of men our profession is calling, and has called, since man's creation, for the *ideal man.*

"It is no mean thing to have been born the possessor of much virtue." Such I think is expressed by "Non mediocris felicitatis est ad virtutem nasci"—said of Osler by Weir Mitchell, one of the fathers in medicine; and if the leaders in law, in the church, as well as medicine, were to give us sketches of their lives, this happy gift to us at birth must be recognized as the factor that causes some men to come out from the crowd, to tell us or do for us what no others think—at least do for us. Of such men is the kingdom of medicine, and if jealousy be silenced, Osler holds the torch in that kingdom.

Selected Articles.

CONCERNING OXFORD.

By ERNEST PATERSON.

In medicine I do not think that Oxford has hitherto held a very prominent place; but there seems to be the greatest confidence that the recently appointed professor, with his great distinction as a scholar, his remarkable skill as a teacher, and his boundless energy, will work a veritable revolution. The readers of this magazine will be glad to know that Professor Osler is clearly anxious to be identified as a Canadian, despite the fact that the States are so eager to claim him as their own on the strength of his long residence there; and that one of the first things he did when he reached Oxford was to join the Colonial Club.

So many authors have chosen Oxford as the scene of their hero's adventures that we are all more or less familiar with the everyday life of the students—their manners, their conversation, their work, their amusements. Though some of these books were written many decades ago, the picture that they present is not, in the main, untrue of present customs. Wine-parties, apparently so prominent a feature in the life of the old days, are almost obsolete. All things that served to emphasize distinctions of ranks have been abolished, so that the etymology of the word "tuft-hunter" has become a piece of antiquarianism. These and other reforms have come about in the fulness of time, but the general tenor of the life has not greatly altered since Tom Brown and Charles Ravenshoe came to Oxford, for few places in this big world are less liable to change. The residence system—to the value of which the University of Toronto has shown itself so keenly alive—is, of course, the distinguishing characteristic, and forms no insignificant part of the Oxford education. The undergraduate's entire life during the academic year is passed in the society of his fellow-students, except such time as he spends with his books in the privacy of his chamber. Many of the American Rhodes Scholars have complained that very little work is done at Oxford, as compared with the colleges of their own country. This I believe to be altogether a fallacy. Indeed, the large amount of ground covered by the Oxonian in his four years is

sufficient evidence in itself. It is nothing but the fact that he studies more regularly, and distributes his reading more evenly over the whole year, that has given rise to the impression. Ten hours in a single day seem to the ordinary Oxford undergraduate altogether preposterous; but, on the other hand, he maintains a fair average of work throughout the term. Indeed, the system of tutors and the frequent tests insure a certain amount of work every week. But more than this (and here lies the great distinction) he does a large part —in many cases even the larger part—of his studying during the vacations. For example, if he is pursuing the Classical course, he will usually read all his texts away from College.

The great prominence given to athletics is a feature of Oxford that always astonishes the stranger; but results seem to furnish its justification. The old division of "reading men" and "rowing men" is a thing of the past; the number of students who win high honors on graduation and show equal prowess with oar or boat is indeed remarkable. Everything is done to encourage sport; the position of the College eight on the river is considered, by dons and undergraduates alike, as of great importance. Rowing, of course, holds the chief position, but almost every game finds its place. As each college has at least one team in every branch of sport, there is a good opportunity for everyone who wishes to participate. Indeed, there are very few who do not take regular exercise in some form or other. During two or three hours in the afternoon, reading is suspended and the period devoted to sport. Almost every man in the College sallies out, clad in suitable garb, to take part in whatever game he affects. This characteristic of Oxford athletics is a most splendid thing. There is not the large body of students that we have in Canada who give no thought to sports, nor that other class of men who are indeed keenly interested, but merely as spectators. At Oxford very few watch the various matches; every man is off playing some game on his own account. The whole tone, too, that permeates Oxford athletics is exceedingly admirable. The spirit of sport for sport's sake is nowhere more prevailing. The desire to win is not at all lacking, but it is subordinated to sheer love of the game. I cannot but think that the Englishman is fonder of physical exercise, as exercise, than the Canadian. If games fail him, he will don light clothes and go for a run round Christ Church meadows. And yet—paradoxical as it may seem when his attitude is such—he is very grave and solemn and sober over his sports. He betrays

little excitement, few smiles, almost no laughter. One is struck by the absolute truth of the old saying that the Englishman takes his amusements seriously.

The Canadian at Oxford is rather at a disadvantage so far as his chances of winning pre-eminence in athletics are concerned, owing to the fact that he is likely to be unfamiliar with the most popular forms of sport. It will seldom happen that he has rowed to any extent; and if he has, his plight will be worse, since he will have to overcome the great "faults" that are inherent in the "American style." It is not probable, either, that he has devoted much attention to cricket, and English Rugby will also be strange to him—unless he be a Nova Scotian. Perhaps, however, he will have some skill in Association football, or lawn tennis, sports that he will be able to pursue at Oxford with great advantage. Lacrosse, too, is played to some extent, though it has not yet gained a very large following. And even if it chances that the Canadian has played none of these games before, he will readily find abundant opportunities for enjoyable exercise, if he is at all athletically inclined.

About Oxford men, as men, one hesitates to pass any definite judgment. Generalities are dangerous at their best, and, unless based on a wide and deep knowledge, almost worthless. One with the slight experience of a single year is apt to measure all by the small circle of his acquaintance, and to infer differences of character from differences of custom. There are many types at Oxford—perhaps even more than at our universities. Men come with aims extremely diverse. On the whole, I should say that so far as "soundness" is concerned—an expressive word which is in common use among Oxonians—the standard is high. The general tone and atmosphere is essentially wholesome. "Honor" has a deep significance for the Englishman, and is inseparably bound up with the meaning that he gives to the word "gentleman"; nor is unselfishness, generosity—"decency" in a word—wanting among the men. It is true that a Canadian will miss a certain warmth and heartiness of manner to which he has been accustomed. The Oxonian will seem to him, especially on first acquaintance, rather formal, even a little stiff and cold. This reserve, which we commonly regard as an English trait, is nowhere more evident than at Oxford. That it is something affected because considered "good form" is an inference that we are rather apt to make; but I am certain that such an inference is altogether wrong. The fact that individuals who do

not possess this national characteristic are by no means regarded with disfavor, is sufficient to show that it is a pure matter of temperament. The distinction is more or less clearly recognized, I believe, and I have even heard a don speaking, not without a note of approval in his voice, of "colonial geniality." The obvious retort to the charge I have made, if it be considered as a charge, is that this trait is mere manner, nothing more than a surface peculiarity, and that when one comes really to know him, the Englishman will reveal the warmest of hearts. I hope, in all sincerity, that I shall never have reason to think otherwise; I by no means wish to be understood as believing the contrary, though, indeed, whether there can be such a thing as mere manner, a superficial growth entirely distinct from the underlying man, may perhaps be fairly questioned. But what I wish to suggest is this, that regarded as nothing deeper than manner, the trait is somewhat unfortunate; that cordiality of speech and bearing, that genial *bonhomie* to friend and stranger, which adds to life so much pleasure and beauty and grace, is surely no insignificant thing. Is it possible that England has not yet freed herself completely from the fault with which Goldsmith reproached his country a hundred and forty years ago?

I fancy that it must be admitted that the Oxford man is more widely read than the Canadian student of the same age. It must be remembered that those who go to Oxford are, in a sense, picked men. The typical undergraduate comes from a cultivated home, "a reading family." From childhood he has "tumbled about in a library" (to use a phrase of the kindly Autocrat), and lived in an atmosphere of books. But what impresses a Canadian even more strongly is the deep interest that the Oxford man takes in politics. He is thoroughly in earnest about it; he informs himself carefully in regard to the prominent questions of the day, and is eager to support his views in debate against those who hold other opinions. The Union, that training-ground of statesmen, is, of course, the centre of this activity, but there are many other societies that concern themselves with similar subjects, and every college has its own two or three debating clubs. One cannot but feel that this ardent interest of university men in politics is a magnificent thing for England.

The Canadian is, I am afraid, apt to imagine, for some reason, that the general tone of Oxford is essentially aristocratic in the narrow sense of the word. As far as my experience extends, I should say that this idea is utterly erroneous.

Few places, I believe, are more genuinely democratic. A man is taken at his intrinsic worth, whether he be the son of a shop-keeper or a peer. Class distinctions are given no emphasis, and wealth counts for absolutely nothing. It is true that more regard is paid to good-breeding than with us; but perhaps the fault is ours, a fault that is almost inevitable in a new country. The men speak better than we do. I do not refer to what is vaguely called "accent." We have in Canada unfortunately deviated in some respects from the English standard of pronunciation; but that is quite irremediable, and perhaps is not of vital importance. But what I mean is that Englishmen speak more carefully and accurately, with less haste, and with, I fancy, a better choice of words. Moreover, though their speech is made vivid and picturesque by a certain amount of "slang," they do not come to depend on it, do not allow themselves—I might almost say—to be enslaved to it, as is the danger with Canadian young men; nor do they indulge in the "slang" that consists in violations of construction and breaches of syntax. And, finally, it is annoying to be forced to confess that their voices are better than ours, less harsh, and pitched in a deeper key.—*University of Toronto Monthly.*

COLD AIR IN VARIOUS DISEASES AND FOR HEALTHY PEOPLE.

Cold air in tuberculosis is now being given the credit for the wonderful results in mountain resorts. It is almost an axiom that one winter in the Adirondacks, for instance, does as much good as two summers. Patients, both here and in Europe, are kept out-doors all the year round, even when the thermometer drops to 30 or 40 deg. F. below zero, and the cold air of itself seems to cure in a manner which nothing else can accomplish. In some sanatoriums forced feeding is not practiced in the incipient stages, as it is not as beneficial as a merely good, generous, animal diet, and though hyperalimentation is a positive necessity in later stages, particularly if any emaciation has occurred, it is not a means of treating the early cases which have not suffered loss of weight. Sunshine is not essential—excellent results may be obtained in climates where the sun is very rarely seen. Mere outdoor living seems to be the essential element, and yet there does not appear to be any

doubt that quicker results are obtained in the cold season than in the summer.

* * *

The cold-air treatment for infantile pneumonia is discussed in a vigorous manner by Dr. W. P. Northrup, Professor of Pediatrics of Bellevue (*New York Medical Record*, February 18th, 1905). The method is such a startling change from the orthodox treatment of past generations, and yet so in line with recently acquired knowledge in other directions, that it is time for the profession of medicine to call a halt and overhaul its stock opinions. If the child's temperature is 105 deg. F., it certainly is illogical to make it higher by hot chest poultices, heavy coverings, crib in a corner of the room, steam kettle boiling, gas leaking into room, and every breath of fresh air carefully excluded. Yet this is just the course instinctively followed by every mother, who always associates pneumonia with cold and its cure with heat. Northrup details two desperate cases treated upon the opposite plan, and though he leaves but little doubt as to the perfect reasonableness of it all, it is to be confessed that it will be difficult to make the average mother carry out the treatment. A room temperature which compels the attendants to wear overcoats and furs does seem harsh, but if the results are explained there should be no complaint. Cyanosis disappears, the blood reddens, restlessness diminishes, sleep comes on, the heart is stronger, the respiration is less labored, indigestion is improved—and all from the cold air which bathes the little sufferer's face and enters its lungs. If such great good can be accomplished by this simple means, surely an effort should be made to induce mothers to carry out the method in all such cases.

* * *

The cold-air treatment in pneumonia of adults has also been tried with apparent benefit. It is said to reduce cyanosis, lessen the rate of respiration and pulse, steady the heart, lessen fever, and reduce the discomfort and pain. It also seems logical to keep the patient cool all the time, instead of reducing his temperature only periodically by sponge baths, or even tubbing. In northern winters the windows have been kept open in the sick-room, even when the thermometer was much below the freezing-point. The patients promptly complain if the windows are closed and the air becomes warm and stuffy. It is not mere fresh air and ventilation, but the coldness which is appreciated. Taken with the results of similar treatment in tuberculous infection, it seems that there is some special

benefit derived from cold air in all pulmonary infections. Pneumonia is said to be very rare, or even unknown, in the Arctics, and yet Eskimos perish of this disease when brought south. In the cold parts of the north-west, pneumonia rarely appears in the bitterly cold winter months, but is more a disease of spring, and even summer. Dr. Charles E. Page, of Boston (*New York Medical Journal,* Dec. 23rd, 1905), not only emphasizes the necessity of cold, fresh air in pneumonia, but also the benefit of cold applications to the chest—constant cold, not periodical. He has many caustic things to say of the opposite methods, which appear to increase the dangerous symptoms. Perhaps we can detect a growing tendency to keep all fever patients in cold air whenever practicable. The Japanese seem to obtain good results by this method, for their hospital wards in cold weather are kept at a low temperature, which would be considered brutal with us.

* * *

Cold air for typhoid and all other infections is but a step further—not cool air but cold. If all these new ideas are to be carried out to their legitimate conclusion, it is surely proper to immerse every patient in his normal cold atmosphere and not a tropic one. He can be properly covered, even if he is breathing air freezing cold, but to make him breathe hot air seems as illogical as to place trout in warm water. The Brand method of cooling typhoid patients is known to save several in every hundred, and its remarkably beneficial effect on the nervous system is said to be the main reason. A walk through a typhoid ward where cold baths are given, reveals so many bright, intelligent faces—so different from the stupor of typhoid curing itself—that one almost thinks it is a different disease. It seems to have the same tonic effect as cold in surgical tuberculosis, but it is in order to inquire why the patient cannot be kept in cold air to continue the effect, properly covered, of course, so that it merely bathes his face and head and upper air passages. Perhaps the cold air of mountainous regions is the reason why typhoid takes such a mild course that it was actually considered a different disease for so long a time. The whole matter is worth considering in every other infection, if with no other therapeutic view than with the mere idea of placing the patient in the normal European atmosphere known to be good for his ancestors.

* * *

Cold Air for Healthy People.—The thought is naturally suggested that perhaps cold air has hygienic as well as thera-

peutic uses. Warm sleeping rooms are strictly modern inventions, and pneumonia as a serious menace to life is also a comparatively recent affair. It is time, then, to inquire if our over-warmed houses have any relation to the appalling increase in pneumonia. Does not this continual tropic house warmth actually reduce the tone of the tissues and make them more susceptible to bacterial invasion? Foreigners bitterly complain of the heat of our houses, and Americans abroad have equal objections to the coldness of foreign houses—keenly suffering in a Parisian hotel, for instance, which is perfectly comfortable to the native. In Japan it is the same, Americans apparently being unable to live in the paper houses of the natives, who are comfortable even when huddled around a few coals of fire. Perhaps the types of men in northern Europe, through ages of exposure to cold, have actually developed a physique which is not only inured to cold, but actually functions better in cold air than in hot. They surely are healthy and strong now, and do not suffer in the least from the cold. We rather look upon hot weather as relaxing and destructive of vitality, and expect health with return of cold weather. Brook trout perish if the water they breathe is raised only a few degrees in temperature. There is enough in this matter to cause us to think about it a little. If so many cured tuberculous patients are now sleeping in cold air every night and living in it in the daytime, too, as much as possible, perhaps the rest of us are only injuring ourselves by the opposite course. Only a few years ago the cold-air fiend, who slept with windows wide open in the coldest winter, was considered a crank. Perhaps he will prove to have been the only sensible one among us, and was merely imitating the ways of his ancestors, who had practically no way of warming their houses.—*American Medicine.*

Editorials.

BRITISH MEDICAL ASSOCIATION.

The Transportation Sub-Committee makes the following announcements as to fares, etc., for those attending the meeting at Toronto, August 21-25, 1906:

1. *Fares, Going Dates, and Limits.*—(*a*) Domestic Business, Certificate Plan Arrangements: free return regardless of number in attendance. Passengers going rail, returning R. & O. Nav. Co., or *vice versa,* rate to be one and one-half fare. (*b*) European Business: On presentation of certificate, to be prepared and signed by the Secretary of E. C. P. Association, and countersigned by the Secretary of the Canadian Committee, or the Secretary of the British Medical Association, one-way tickets to be issued at one-half lowest one-way first-class rail fare; round-trip tickets at lowest one-way first-class rail fare between all points in Canada. Rates to Pacific Coast subject to concurrence of T. C. P. Association. Steamship lines to advise Secretary what, if any, additional arbitraries are required.

Dates of sailing, July 1st to September 30th, 1906, inclusive. Final return limit, September 30th, 1906.

2. *Extension of Time Limit.*—On deposit with Joint Agent of Standard Convention certificates issued from points in the Maritime Provinces, from points west of Port Arthur, and from points in the United States, on or before August 28th, 1906, and on payment of fee of $1.00 at time of deposit, an extension of time until September 30th to be granted. Joint Agency to be conducted in the name of G. H. Webster, Secretary, E. C. P. Association, will be kept open from August 21st to September 15th, 1906.

3. *Side Trips.*—Side trip tickets to be sold from Toronto to delegates from the Maritime Provinces, from all points west of Port Arthur and from the United States, on presentation of validated certificate, or deposit receipt, at lowest one-way first-class fare for the round trip, to all points in Canada.

Dates of sale, August 23rd to September 1st, 1906, inclusive. Return limit, September 30th, 1906.

Usual additional arbitraries *via* Upper Lake steamships to apply, viz., going lake, returning same, $8.50 additional to be collected; going lake, returning rail, or going rail, returning lake, $4.25 additional to be collected. Also usual arbitraries *via* St. Lawrence route, for delegates desiring to return by steamer on presentation of tickets to purser, viz., $6.50 Toronto to Montreal; $3.50 Kingston to Montreal.

Via Northern Navigation Company, on lines where meals and berth are not included, the rail rate will apply; on lines where meals and berth are included, rate to be single fare plus meal and berth arbitrary.

THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

It is exceedingly satisfactory to learn from the officers that they are much encouraged with the work of the Association, and that they feel assured that its usefulness has been abundantly proved. We hope that our readers who have already joined this society will continue to do some work in its interest and especially induce others to join. The membership is still small when compared with the big army of physicians in Canada.

The annual fee is three dollars. The officers prefer remittances by postal note, post office order, or express order. By resolution at the Halifax meeting the membership has been made permanent, and each member will be liable for annual dues until he resigns. If remittances are not received by the first week of February the Treasurer will draw on each delinquent through the banks.

THE NEW HOSPITAL FOR TORONTO.

It is difficult for many of us to realize the fact that the subscriptions for the new hospital for Toronto exceed consider-

ably the million dollars, the amount at first asked for by the present Board. A bill will be introduced in the Ontario Legislature at the coming session which will create a new charter. The representation of the various interests on the new Hospital Trust will be as follows: The Government, 8; the University, 5; the City of Toronto, 5; the benefactors, 7; total, 25.

Dr. Brown, the present Superintendent of the Toronto General Hospital, recently told the Toronto *World* that the present trustees, certain members of the City Council, members of the Faculty of Medicine, and certain benefactors, were dealing with the new hospital scheme. This body has divided itself into four sub-committees. One is dealing with the question of a site; a second is considering the choice of an architect; a third is framing a new charter, and a fourth is considering the methods of providing relief for patients suffering from tuberculosis.

THE AMALGAMATION OF SOCIETIES IN NEW YORK.

We are pleased to learn from the *Buffalo Medical Journal* that the Medical Society of the State of New York and the New York State Medical Association, after twenty-two years of separation, have recently agreed to unite, and thus form one great medical society for the "Empire State" of the neighboring republic.

The original society, known as the Medical Society of the State of New York, was organized in 1807, and held its one hundredth meeting January 30th, 31st, and February 1st. About twenty-five years ago some trouble commenced in the city of New York respecting what was known as the old code, and a new code came into existence. The advocates of the different codes became two hostile bands, and one of the results was a split in the old State Society and the formation of a new association.

The *Buffalo Medical Journal,* in an editorial on the subject, gives much credit to two distinguished American physicians, speaking as follows:

"But we must not forget, in the haste of the moment, to accord credit to two men above all others, for laying the foundation of medical unity in the State of New York. We refer to Dr. Lewis S. McMurtry, of Louisville, reigning president of the American Medical Association, and Dr. Charles A. L. Reed, of Cincinnati, a former president of that body. Both of these gentlemen attended a meeting of the society fifteen years ago, read papers and took active part in the proceedings. They made the acquaintance of the society, its members and methods, and have taken an active interest in its affairs since that time. They have visited it occasionally since, and through these visits resolved to do all in their power to end the dual systems of state medical organizations."

We may add that they were induced to attend the meeting referred to by the able, active and genial president of that year, Dr. William Warren Potter, of Buffalo.

NOTES.

A Retreat for Women Physicians.

A number of the women physicians of Toronto received invitations to attend a Retreat for Catholic women physicians (at which non-Catholic women physicians were also welcome), to be given by the Rev. Father Pardow, at St. Regis Convent, 140th Street and Hudson River, New York City, from Thursday evening, December 28th, 1905, till Monday morning, January 1st, 1906. This is, so far as we know, a new departure, and the kindness of the invitation was appreciated by the ladies to whom it was extended.

Mrs. John Elder, LL.D., of Glasgow University.

The death of Mrs. John Elder, of Govan, the widow of the great ship-builder and engineer, Mr. John Elder, of Glasgow, removes from the world one who was a benefactress, and will ever be remembered in the great city where she lived for her generosity and public spirit. There are many nowadays who have made a million, but Mrs. Elder in her life-time gave away a million (£200,000 and more) to medical education

and to other good works. She built Elder Cottage Hospital and endowed it in her will with £50,000. In the year 1883 she presented to the newly-founded Queen Margaret College (of which she was one of the founders) the Women's Department of the University of Glasgow, one of her own residences, the buildings and grounds of which have ever since been occupied by the College. This great gift was on condition that an endowment fund of £20,000 should be raised. The endowment was undertaken by Mrs. Campbell, of Tullichewan, who collected and presented to the College a fund of £25,000. Queen Margaret College is now a great institution. It has an average attendance of 400 women, and in the Medical Department alone there are 80. When the University of Glasgow celebrated its ninth jubilee, the honorary degree of LL.D. was conferred upon Mrs. Elder and Mrs. Campbell, they being the first women to receive such an honor. And Mrs. John Elder has now passed away. How many important things are *not* cabled to us from Britain, and how many unimportant things *are*. The memory of the just is blessed.

Ontario Medical Association.

The attention of the profession throughout the province is called to the annual meeting of the Ontario Medical Association for 1906, under the presidency of Dr. George A. Bingham, of Toronto, with Drs. D. J. Gibb Wishart and H. J. Hamilton as chairmen, respectively, of the Committees on Papers and Business and of Arrangements.

By vote of the members at the last meeting, that of this year will take the form of a business session, preceding the meeting of the British Medical Association, which will begin August 21st. Consequently our provincial meeting will be convened Monday evening, August 20th, at 8 p.m. We will thus avoid conflicting with the necessary sessions of the Canadian Medical Association, and the members will arrive in none too early time to participate in the Imperial meeting of the next day.

Members are particularly requested to remember this announcement. Notification of the various committees will be made at the accustomed date.

TECHNIQUE TO BE OBSERVED IN THE OPERATING ROOM OF THE TORONTO GENERAL HOSPITAL.

Bearing in mind the use to which the amphitheatre is devoted, great care should be exercised to keep the floor and seats of that part occupied by the students as free from dust as possible.

Preparation of Arena for Operations.—The floor should be scrubbed at least once daily with soap and water, and afterwards thoroughly wet with a solution of bichloride of mercury, 1-2000. The walls, seats, fixtures and all movable apparatus should be scrubbed once a day, and afterwards washed with bichloride solution, 1-2000. The operating table should be thoroughly wetted with carbolic solution, 1-20, immediately before each operation. If the table has been used for a septic case, it should have a thorough scrubbing and douching with soap and water, followed by bichloride solution immediately after the operation.

Dress of Surgeons.—The operating surgeon and all assistants should be clothed in sterilized gowns with sleeves long enough to be overlapped by the gloves, and with caps provided with visors to cover the nose and mouth. Each surgeon may, and assistants shall, wear rubber gloves, and care should be taken that these gloves are free from holes.

Dress of Onlookers.—All onlookers on the floor of the operating room in important operations should be clothed in gowns and caps with visors. No such onlookers are, however, to be admitted except by consent of the operating surgeon.

Dresses of Nurses.—Similar to that of operating surgeons and assistants, except that the cap should be of folded gauze large enough to cover the hair.

The gowns, caps and gloves of all surgeons and nurses should be put on by a nurse (sterilized) detailed for this work. This nurse should take pains to avoid touching any part of the clothing of those whom she is dressing, and, in case of such accident, she should frequently rinse her own hands in bichloride solution, 1-2000. She should not assist in this work after putting on her gloves preparatory to handling the sponges.

Sterilization.—All linen, gowns, caps, towels and dressings should be sterilized by steam, at a pressure of 15 lbs., for at least half an hour.

In the case of prepared dressings, such as iodoform gauze,

double cyanide gauze, or other manufactured gauzes, the receptacles containing such should be sponged off with bichloride solution, 1-200, before being opened, and should be handled by sterilized hands and instruments, such as forceps, for removing the gauze.

Tubes of sterilized catgut, silkworm gut, horse hair and silver wire should be kept completely covered in a carbolic solution, 1-20 (this solution should be changed once a week), and removed therefrom before the operation to sterilized water or an antiseptic solution. Silk or celluloid sutures or ligatures should be boiled for half an hour on first preparation, and afterwards be stored in ac. carbolic, 1-20, or in alcohol.

Rubber tubing for drainage purposes should be washed with green soap and water—where possible, inside as well as outside—then rinsed in sterilized water and afterwards scrubbed with ether, then boiled for half an hour and kept covered with carbolic acid, 1-20. This should be changed once a week.

The rubber tubing, nozzles, etc., for irrigating purposes should be kept in carbolic acid, 1-20, and after operations should be disconnected, washed and boiled.

Jars, funnels, basins, and all receptacles should be thoroughly scrubbed with green soap solution or sapolio, then rinsed with sterilized water and boiled in the carbonate of soda solution.

The basins to be used in the operation should be carried in a basket, covered by a towel, to the operating room, and placed in position by a nurse whose hands have been sterilized.

Instruments.—All scissors, scalpels and needles should be wiped with alcohol, then soaked for half an hour in carbolic solution, 1-20, and afterwards transferred to sterile water. All other instruments should be boiled in carbonate of soda solution for 10 minutes immediately before the operation, and then transferred to sterilized water. To prevent discoloration of steel, the instruments should not be immersed until the water is boiling.

Instruments in Emergency.—Should any instrument, not previously prepared, be called for during the progress of an operation, it should be entirely immersed in pure carbolic acid for 2 minutes, then seized in a pair of sterile forceps and vigorously rinsed for a moment in sterilized water before being handed to the surgeon.

List of Instruments.—A record of the number of forceps, scissors and needles used in each abdominal or thoracic operation should be kept, and the number accounted for before the

wound is closed, the house surgeon in charge of the instruments being held responsible.

Care of Instruments after Operation.—(*a*) After cleaning cases, all instruments, including scalpels, scissors and needles, should be washed and scrubbed with a brush in warm (not hot) soap suds, then transferred to hot, sterilized water for a few moments. This water should then be poured off and the instruments very carefully dried while still hot.

(*b*) After septic cases, all instruments, including scalpels, scissors and needles, should be scrubbed and washed as above, then boiled for five minutes, and afterwards dried as above.

Gloves.—Before operation, gloves should be wrapped in a towel and boiled for five minutes, totally submerged, and then placed in sterilized water or antiseptic solution.

(*b*) After operation, gloves should be thoroughly washed in green soap and water, then turned inside out and thoroughly washed again. While in the solution each glove should then be very carefully examined for holes and rents, and, if any be found, such gloves should be set aside for repairs. If they have been used for septic cases they must be boiled after being scrubbed. They should then be stored in bichloride solution. 1-2000, or dried and powdered.

Repair of Gloves.—The part around the hole should be wiped with gasoline or benzine, slightly roughened with fine sand-paper or emery-cloth, then smeared with rubber cement, which should be allowed to become almost dry. The patch to be applied should be prepared in the same way, and when the two surfaces are nearly dry they should be pressed firmly together. The patches should be placed upon the inside of the glove. It should be recognized that the damaged glove is a menace, because not only may septic matter be pumped into the surgeon's fingers, but macerated epithelium and germs may be pumped out from the skin of the surgeon to the wound of the patient through a very small opening.

Extra Gloves.—There should be on hand, prepared, two or three pairs of extra gloves, in case the operating surgeon or assistants should deem it advisable to change during the operation.

Cleansing of Hands.—The hands of all surgeons and nurses, and the forearms, including the elbows, should be thoroughly scrubbed with soap and water and a brush under running water for at least five minutes, then washed in alcohol (65 per cent.), and afterwards soaked in 1-40 carbolic, or 1-2000 bichloride solution for two minutes. After disinfection the

hands should never be dried on a towel, nor allowed to dry in the air.

Gauze Sponges, Wires and Pads.—These should be of various sizes, adapted to the needs of various operations. They should be made of gauze of good quality, so prepared that there are no loose edges upon the surface. They should be sterilized by steam under pressure, as above described, and should be rinsed out of sterilized water or antiseptic solution.

In quite clean cases they may be rinsed out of sterilized water and used over and over again during the operation, but in septic cases, or when contaminated with feces, urine, mucus, etc., they should be discarded after being used once.

In abdominal operations all gauze sponges should be provided with tapes, and should be carefully counted before operation and accounted for before operation is finished. A number of very large gauze sponges, say 1 foot wide by 2 feet 6 in. long, should be constantly on hand in case of abdominal operations in which large masses of viscera are necessarily exposed, as in operations for intestinal obstruction.

Sea Sponges.—Sea sponges, after preparation, should be kept in 1-20 carbolic acid; when required for use they should be removed from this solution to sterilized water or antiseptic solution. Sea sponges should be on hand in every operation about the mouth or throat, and in other operations when preferred by the operating surgeon.

Stock Solutions.—There should be kept on hand in very large bottles solutions of the following: Acid carbolic, 1-20; acid boracic, 1-20; hydrarg. bichloride, 1-500 and 1-1000; sterilized normal saline solution (double strength); rectified spirits; ether; turpine; gasoline, in pint bottles.

In making up solutions from these stock mixtures great care should be taken that these solutions are of the designated strength, and vessels of known size should be used in compounding the solution, or the basins should be graduated by easily observed lines indicating quarts.

Spare Basins.—There should be available for the use of the surgeon during an operation: (*a*) a basin of carbolic acid solution, 1-40, or bichloride solution, 1-2000, according to individual preference; (*b*) a basin of sterilized water or normal saline solution.

A similar arrangement of basins should be available for the nurses.

Number of Surgeons and Assistants.—In all major operations there should be, in addition to the operating surgeon, a

first, second, and third assistant, and at operations of unusual magnitude, such as amputation at the hip joint, a fourth assistant will be required. For minor operations two assistants only may be required.

Number of Nurses.—The operating room nurse should be sterilized, and have general supervision over all her assistants and the general conduct of the operation and operating room. She should not merely superintend but be prepared to lend a hand where her judgment shows that she may be useful. For major operations she should have three assistants. The nurse who is to hand sponges may assist without gloves in preparing the operating room and dressing the surgeons and nurses before the operation commences, but after she takes charge of the sponges and towels she should not be required to do anything else, and should take the utmost pains to prevent the accidental infection of her hands or the sponges, towels and dressings in her charge. In case of any such accident she should rinse her gloved hand thoroughly in 1-2000 bichloride solution.

Care of Patient after Operation.—After the completion of the operation the responsibility for the proper care of the patient rests upon the senior house surgeon, who should either accompany him to the ward himself or instruct a competent junior to do so.

It is the duty also of the house surgeon, on the return of patient to the ward, to acquaint the nurse in charge of the patient with the character of the operation which has just been performed, and with instructions as to the after-treatment and any emergencies which may arise owing to the peculiar nature of the operation.

Preparation of Area of Operation while Patient is in the Ward.—With regard to the area to be prepared, it is difficult to lay down any definite rules; but the general principles may be indicated by saying that, for example, when the operation is upon the trunk of the body, such as in kidney cases, an area extending at least 15 inches in all directions from the actual seat of operation should be prepared. Where possible, the preparation should be commenced the day before the operation, and should be carried out as follows:

(1) The whole area should be shaved; (2) the part should be thoroughly wetted and rubbed gently for about one minute with turpentine. In case of mechanics with very much soiled and greasy hands, gasoline is an excellent solvent, and should be used before the turpentine is applied; (3) thoroughly scrub

the whole area with a soft nail brush, using soap and acid carbolic solution, 1-40; (4) apply a wet dressing of bichloride solution, 1-2000, over night; (5) next day, two hours before operation, repeat the wetting with turpentine; (6) repeat scrubbing with soap and acid carbolic solution, 1-40; (7) apply a layer of gauze, thoroughly wetted with bichloride. 1-2000, and bandage in position until the time of operation; (8) when the patient is on the table and everything ready for the operation, this gauze should be removed and the whole area thoroughly swabbed with 65 per cent. alcohol. In case of emergency operations this method of disinfection should be carried out as thoroughly as possible, using gasoline instead of turpentine, after the anesthetic is administered. The preparation should be conducted by either a competent nurse or the house surgeon.

Special Technique in Septic Cases with Pus.—Where it is known that pus will flow as the result of the operation, the surgeons and nurses should join their efforts to confine the pus and the septic products of the operation to the smallest possible area. The operating table should be entirely overlaid with rubber sheeting covered with sterilized towels or sheets. Vessels should be provided and put into position to catch the pus as soon as it flows. Large, loose tampons should also be used to mop up any escaping pus, and a receptacle for these should be provided immediately at hand, so that the pus is not passed across the operating table or to the nurses' table. These tampons and all infected sponges and gauze should, of course, afterwards be destroyed.

Recognizing the almost insuperable difficulties of disinfection after contact with virulent septic products, the utmost care should be observed by house surgeons and nurses not to become infected with such toxic matter. Forceps may often be used to handle infected sponges.

After such operations, any utensils or instruments known to have come in contact with the pus should be carefully kept from contact with uninfected utensils and instruments during the process of cleaning up.

INTERNATIONAL MEDICAL CONGRESS.

Arrangements are being completed with regard to the fifteenth congress, which meets in Lisbon from the 19th to the 26th of April. The principal general addresses will be delivered by Sir Patrick Manson, London; Prof. Brissaud, Paris; Dr. Jose Maria Esquerdo, Madrid; Dr. P. Aaser, Christiania; Prof. Azevedo Sodre, Rio de Janeiro; Prof. Neumann, Vienna; Prof. Prince Jean Tarcharoff, St. Petersburg; Prof. E. von Bergmann, Berlin.

The different nationalities are well grouped. The delegates from Great Britain, Canada, Australia and the British colonies will have a common meeting place.

As to the service of lodging, it will be in charge of M. Manuel Jose da Silva, Praca dos Restauradores, Palacio Foz, Lisbon, to whom may be addressed all correspondence on this subject.

Applications for membership will be received until the hour of the opening of the congress and during the congress, but in order to secure reductions granted by railways and navigation companies it is necessary to give your name as soon as possible. All such correspondence may be addressed to the Secretary-General, M. le Professor Miguel Bombarda, Nova Escola Medica, Lisbon.

Regarding the *fetes* and receptions which will be given in honor of the members of the congress, it is announced that there will be three general *fetes* and there will probably be several receptions and dinners *de gala*. A bull fight according to the old Portuguese way will be organized at the expense of the congress. The definite details will be published at a later date.

We understand that a number of Canadians have already decided to attend the congress. Any member of the profession in Canada who desires to join the Canadian committee is requested to communicate at an early date with Dr. A. McPhedran, or Dr. W. H. B. Aikins, of this city, who will be glad to furnish all available information.

HAMILTON MEDICAL SOCIETY.

The regular monthly meeting of this society was held January 3rd, in the Hotel Royal, the President, Dr. Ingersoll Olmsted, occupying the chair. The programme was as follows:

1. "Round Ulcer of Duodenum," Dr. J. Albert Dickson.—

In the discussion which followed the reading of notes of three cases, attention was directed to these points: That in one case the patient was syphilitic, in the second tubercular, and the third an alcoholic, with cirrhotic liver and kidneys; that accurate diagnosis of the condition is difficult or impossible before hemorrhage or perforation occurs.

2. "Compound Fracture of Skull," Dr. L. W. Cockburn.—A case was presented, with history, where the patient in an accident had a complete osteoplastic flap removed from the head. Both bone and scalp were replaced and the wound drained. Patient made a perfect recovery.

Dr. Cockburn also presented a patient who illustrated strikingly the value of conservative surgery. The man had had a complete crushing of his right hand, so that the member was practically disorganized. Instead of the usual procedure in such cases—amputation at the wrist-joint—the hand was cleansed as well as possible and dressed. As a final result the patient showed instead of a stump a comparatively useful, though deformed, hand.

3. Microscopic specimens, Dr. J. Albert Bauer.—Demonstration of stained sections of some interesting pathological specimens.

4. Gross pathological specimens were shown by Drs. Olmsted and Mullin, with reports of the cases.

Fever During Menstruation as Early Sign of Tuberculosis.

Franck announced four years ago that a rise in temperature preceding or during menstruation is a strong presumptive sign of a morbid process somewhere in the body. It points especially to tuberculosis, and if the woman is anemic and thin, with a tendency to sweat and to catch cold readily, the physician will do well to inaugurate antituberculosis treatment or to recommend a sanatorium, superfeeding or a course of cinnamic acid or iron and arsenic. He is convinced that the normal limit of the temperature is 37.5 C. (99.5 F.), measured in the rectum, and that even a fraction of a degree above this is fever. Sabourin and Kraus have also recently pointed out the importance of fever during menstruation as an early sign of tuberculosis. Measured in the rectum, a fraction of a degree above normal may be due to the hyperemia of some inflammatory affection in the adnexa, but, if such can be excluded, then the assumption is in favor of tuberculosis.—*Ber. Klin. Woch, and J.A.M.A.*

MEDICAL ITEMS.

The following physicians were elected at the recent political contest in Saskatchewan: Dr. W. Elliott (Tor. '93), for Wolseley; Dr. D. D. Ellis (Vict. '85), for Moosomin, and Dr. A. S. Shad (Trin. '98), for Kinistino.

The fourth annual dinner of the New York University of Toronto Club was held at the Hotel Astor, January 26th. Dr. Algernon Temple and Dr. Charles Sheard, of Toronto, were the guests of honor, and both delivered excellent addresses, which were highly appreciated.

The following have been appointed for the usual six months' service on staff of Toronto General Hospital: In surgery, Dr T. D. Archer, Campbellford, Ont.; Dr. J. H. Soady, Toronto; Dr. J. H. Kidd, Peterboro'. In medicine, Dr. K. H. Van Norman, Toronto; Dr. F. W. Ralph, Markham; Dr. F. J. Buller, Toronto.

The following were elected officers of the University of Toronto Medical Society, January 26th: President, P. J. Kirby; vice-president, H. L. Emmett; treasurer, R. F. Bennett; corresponding secretary, J. L. McPherson; assistant treasurer, J. McInnis; curator, R. Richardson; councillors, L. J. Simpson and Wm. Brace.

The following physicians have been appointed associate coroners: Dr. Robert T. Porter, of Walkerton, for county of Bruce; Dr. Francis R. Seager, of Brigden, for county of Lambton; Dr. George W. Graham, of 249 Avenue Road, for Toronto; Dr. Francis W. E. Wilson, of Niagara Falls, for county of Welland; Dr. Enoch L. Roberts, of Simcoe, for county of Norfolk.

The sixth annual meeting of the Canadian Association for the Prevention of Consumption and other forms of Tuberculosis will be held in the Railway Committee Room of the House of Commons on the 28th of March next. The Hon. Senator Edwards will preside in the afternoon. In the evening a public lecture will be delivered in the lecture hall of the Normal School, by Dr. Arthur J. Richer, of Montreal, which will be illustrated with stereopticon plates, showing the stages of consumption, and some of the appliances now in use to check and cure the disease. The chair will be taken in the evening by His Excellency, Earl Grey.

Personals.

Dr. W. H. Harvey, of Toronto, left for England, Jan. 13th.

Dr. T. B. Stevenson (Tor. '04) has settled in Ponoka, N.W.T.

Dr. C. E. Spence (Tor. '05) has gone to West Hope, North Dakota.

Dr. A. C. Sinclair has removed from Rossland to Vancouver, B.C.

Dr. J. C. Beatty (Tor. '05) is spending part of the winter in California.

Dr. Kenneth D. Panton (Tor. '04) is practicing in Portland, Oregon.

Dr. Harold P. Martin has commenced practice at 36 Carlton Street, Toronto.

Dr. J. L. Turnbull (Tor. '89), of Goderich, leaves for England some time this month.

Dr. James M. McCormack, of Toronto, was married to Miss Taylor, of Hamilton, December 27th.

Dr. Hopkins has been appointed medical health officer of Toronto Junction in the place of Dr. Mason, resigned.

Dr. Roland Hill (Trin. '90), of Greenleaf, Mich., was married to Miss Nesbitt, of Gilford, Ont., December 27th.

Dr. Arthur Wright, of Toronto, went to New York, January 10th, for post-graduate work in Bellevue and Roosevelt Hospitals.

Dr. Robert P. McLaughlin (Tor. '03), of Cumberland, Ont., was married to Miss McLive, of Niagara Falls, Ont., January 11.

Dr. Arthur T. Emmerson (Trin. '89) will succeed Dr. Jas. L. Turnbull in Goderich, becoming the partner of Dr. Walter S. Turnbull (Tor. '03).

Dr. Alexander Murdock, of Brucefield, who has been doing post-graduate work in Edinburgh and Glasgow during the last two years, has returned to his home.

Dr. Brefney O'Reilly, after a short sojourn in London, England, started on a six months' voyage to Japan by the Red Sea, Ceylon and Malay Peninsula, calling at all important points.

Dr. T. A. Whitelaw (Tor. '94), of Edmonton, N.W.T., paid a visit of two weeks to Toronto in the first half of January, spending the greater portion of his time in the hospitals and university laboratories.

Miss Alice B. Sinclair, a graduate of the Toronto General Hospital Training School for Nurses, and also of the Sloane Maternity, New York, has been appointed head nurse of the Toronto Burnside Lying-in-Hospital in the place of Miss McKellar, resigned.

The new Household Science building, the gift of Mrs. Massey-Treble to Toronto University, will be erected on the corner of Hoskin Avenue and Queen's Park Crescent, east of Wycliffe College, this site having been selected by the university authorities.

The Hamilton Medical Association held its annual business meeting and banquet recently. The following officers were elected for the coming year: Dr. Ingersoll Olmsted, president; Dr. D. G. Storms, vice-president, and Dr. McNichol, secretary-treasurer.

Miss Nina McKellar, the efficient head nurse of the Burnside Lying-in Hospital, connected with the General Hospital, Toronto, for seventeen years, resigned January 1st, and is now residing in Ingersoll. The best wishes of all connected with the Burnside follow Miss McKellar.

Dr. John William Ballantyne, of Edinburgh, Scotland, has been appointed professor of midwifery and diseases of women and children in the University of Edinburgh. Professor Ballantyne is an Honorary Fellow of the American Association of Obstetricians and Gynecologists.

Dr. George W. Badgerow (Tor. '94), who has been living in London, England, for the last seven years, paid a flying visit to Toronto at Christmas time, after which he returned to England, sailing from New York, January 15th. He will go to the south of France for a few weeks.

Professor Wm. Osler came out to Canada from Oxford in December, and spent a portion of Christmas week in Toronto. He was entertained at luncheon at the Dean's residence, University of Toronto, December 26th. He gave a course of clinical lectures at Johns Hopkins during January, also some lectures in Philadelphia. He said the profession of Great Britain were taking a great interest in the coming British Medical Association in Toronto, and hoped that about four hundred would come from the Old Land.

Obituary.

THE LATE DR. FRANK BULLER.

We abstract the following from an obituary notice which appeared in the *Montreal Medical Journal:*

"It is not easy to describe the characteristics of so many-sided a man. Dr. Buller had much of the strong persistent force that marks his English race: his picture stands lined in clear definite outlines, and his character had the firmness that his face betokened. A certain brusqueness of demeanor overlay, but did not conceal one of the kindest of hearts; a decisive, if abrupt, mode of thought was reflected in the decisive action which, applied to his profession, carried him far toward greatness. A striking characteristic—which was part and, in fact, the outcome of his strong nature—was his interest in an obscure case. Such called out all his energy and application, and the possibility of defeat was the only stimulus necessary to invoke the greatest effort of which he was capable. To this may be attributed much of the success that he attained, because such cases make the reputation of the one over the many: the reputation which he gained, he was ever jealous to guard, and his painstaking care was a byword. The physician who safeguards himself by safeguarding his patient first, fulfils 'the greater commandment.'"

A colleague who knew him very intimately, says:

"In very delicate cases, where he feared to trust patients in the hands of untrained attendants, and they were too poor to hire professional nurses, he has been known to stay with the patients all night, after an operation, and attend to the dressing himself, lest the eye, so tender and in such a precarious condition, might suffer needless pain or be injured through a slight mistake. The poor were given the same attention as the rich.

"He would never admit defeat; this was one of his strong points. It inspired confidence in the patient, and study was often and often rewarded with success in cases which others had given up as beyond human aid."

It is a simple thing to utter the words and to pen the sentence of condolence; however heartfelt, they seem to pass away with the occasion that called them forth. A far more enduring thing is the knowledge—that can remain for all time in the minds of those that loved him—that in our colleague our art has lost a very honorable adherent and many a sufferer has lost a friend.

ALEXANDER H. COOK, M.D.

Dr. A. H. Cook, of 232 Dearborn Ave., Chicago, a graduate of Victoria, 1861, died January 9th.

DR. JOHN L. KANE.

Dr. Kane, of Aultsville, died December 7th, from injuries received in a runaway accident, aged 31.

WILLIAM M. CAMERON, M.D.

Dr. Cameron, of Halifax, one of the best known physicians in Nova Scotia, died of paralysis, January 24th.

GEORGE W. THOMPSON, M.D.

Dr. G. W. Thompson, of Toronto, formerly of Humberstone, Ont., died at his residence, 129 Walmer Road, January 20th, aged 69.

WILLIAM JOHN EARLEY, M.B.

Dr. Earley, of Owen Sound, died January 25th. He received his medical education in Toronto, and graduated M.B., from the University of Toronto, 1890.

WM. ARMSTRONG, M.C.P. & S.O.

Dr. Armstrong, of Toronto, died at his home, 13 Fenning Street, January 11th, after a short illness, aged 79. He formerly practiced in Orangeville, but was a resident of Toronto for twenty-six years.

ORLANDO SAMPSON STRANGE, M.D.

Dr. Strange, of Kingston, died January 2nd, aged 80. He was for many years surgeon to the Garrison Battery; was surgeon to the Penitentiary for eleven years, and one of the Governors of the General Hospital for twenty-five years.

JOSEPH CARBERT, M.D.

Dr. Carbert, of Toronto, died January 1st, aged 79. He became a Licentiate of the Medical Board, 1852, and M.D., Victoria, in 1856. Before coming to Toronto he was engaged in a very large practice for many years in Orangeville.

MILTON BAKER, M.D.

Dr. Baker, of Brantford, died in the General Hospital of that city, January 23rd, aged 38. He graduated M.D. from Trinity, 1894, and practiced for about nine years in Springfield, Ont. He removed to Brantford about two years ago. Death is said to have been "due to an ear affection which finally spread to the brain."

FREDERICK W. LAPSLEY, M.D.

Dr. F. W. Lapsley, son of the late Dr. Lapsley, of Scarboro', Ont., died at Wesley Hospital, Chicago, January 12th, of pneumonia, aged 37.

Mrs. Scadding, wife of Dr. Crawford Scadding, of Toronto, died January 31st, of erysipelas.

Book Reviews.

A Text-Book of Pharmacology and Therapeutics, or the action of drugs in health and disease. By ARTHUR R. CUSHING, M.A., M.D. (Aberd.), Professor of Pharmacology in University College, London, Eng.; formerly Professor of Materia Medica and Therapeutics in University of Michigan. Fourth edition. Thoroughly revised. 52 engravings. Philadelphia and New York: Lea Brothers & Co. 1906.

Complaints are frequently heard from older practitioners that the recent medical graduates are therapeutic nihilists. If this text-book were used in the colleges, the cry would soon cease, the "detail man" of the drug houses would become an anachronism, and perhaps even the "proprietary" medicines—the bane of our profession at the present time—would be directed into legitimate paths. There can be no doubt that therapeutics is the most poorly taught subject on the curriculum of the majority of medical schools. Most of the lectures consist of a re-hash of the supposed properties of the drug in question, dating back, sometimes, as far as Galen. This was the kind of teaching which kept medicine at a standstill for seventeen centuries, and it is high time it was thrown from its last stronghold, materia medica. Professor Cushing has rendered a great service to science, especially in America, where we are behind the continent in these matters. Since he has returned to England, a new revision of the U. S. Pharmacopeia has necessitated a new edition of his excellent text-book, which has, of course, included also some of the latest researches. Especially may we mention wood alcohol and chloroform. This is a volume which we can confidently recommend to the practitioner of many years as an antidote to his tendency for polypharmacy, and to the young man, student or graduate, to woo him gently back from his agnosticism.

Culbreth's Materia Medica. A Manual of Materia Medica and Pharmacology for Students and Practitioners of Medicine and Pharmacy. Comprising all Organic and Inorganic Drugs which are and have been official in the United States Pharmacopeia, together with important Allied Species and Useful Synthetics. By DAVID M. R. CULBRETH, Ph.G., M.D., Professor of Botany, Materia Medica and Pharmacology in the University of Maryland, Departments of Medicine, Pharmacy and Dentistry. Fourth edition. Revised to accord with the new U. S. Pharmacopeia, 8th Decennial Revision. Octavo, 976 pages, 487 illustrations. Cloth, $4.75, net. Philadelphia and New York: Lea Brothers & Co., Publishers. 1906.

This is a manual by a practical pharmacist, who knows the everyday problems of the drug trade. The new edition has been brought into accord with the recent revision of the U.S. Pharmacopeia, in which the dosage and strength of many im-

portant drugs was materially changed. There is an exceedingly useful appendix, covering poisons, prescription writing, abbreviations and pronunciations—the two latter being especially good, because they are so seldom found in books of this kind. We regret, however, to observe that the word *co-ca-ine* is omitted from the list—a word universally mispronounced on the American continent.

The new United States Pharmacopeia makes many changes in the strength of drugs and preparations, reducing some, increasing others as much as double. The law recognizes the current U.S. Pharmacopeia as the standard. To avoid accidents and damage suits on the one hand, and puzzling lack of results on the other, both the druggist and doctor must follow the same standard. As a convenient pocket reminder of these changes, the importance of which must be at once obvious to every physician and pharmacist, Messrs. Lea Brothers & Co., the medical publishers, of 706-8-10 Sansom Street, Philadelphia, and 111 Fifth Avenue, New York, have issued for free distribution a carefully prepared leaflet giving an alphabetical list of the important changes. The strength of each preparation listed is given as in both the old and the new U.S. P. To aid in preventing untoward or negative results in the use of powerful drugs this leaflet will prove handy and valuable. A postal card request will bring a copy to any physician, druggist, student or nurse.

Selections.

Ten Years' Experience with Diphtheria Antitoxin.

Billings shows that the mortality rate from diphtheria in New York City in 1889-91 was 37.3 per cent., whereas in 1902-4 it was only 10.8 per cent. The mortality has apparently been reduced over 200 per cent. Very much better results are being obtained at present than during the first few years following the introduction of antitoxin. Of 2,447 cases of diphtheria treated between 1895-1897, 641, or 26 per cent., were laryngeal. Of 4,730 cases treated from 1902-1904, only 628, or 13 per cent., were laryngeal. Billings says that there can be no doubt that this decreased frequency of laryngeal involvement is directly due to early, larger and more frequently repeated doses of antitoxin. Less than 0.5 per cent. of all children immunized contracted the disease.—*N. Y. M. J.*

Control of Nasal Hemorrhage.

Mulford's method consists in the subcutaneous injection of adrenal extract into the arterial supply at the nearest accessible point to the bleeding area. The injection may be made directly into the artery supplying the part, or it may be thrown into the tissue closely adjacent to the artery. The ingoing arterial current sweeps the solution directly into the leaking area, all the vessels of the part are constringed, and almost at once the hemorrhage ceases.—*Amer. Med. and J. A. M. A.*

Carcinoma is a Parasitic Disease.

Butlin insists that carcinoma is a parasitic disease, not in the limited sense in which this term is sometimes employed, as synonymous with infective, but in the larger and wider sense in which it should be employed, to express the fact of one organism living at the expense of another, each pursuing its otherwise separate and independent existence. He maintains that the carcinoma cell is an independent organism, like many a protozoon; that it lives a life which is wholly independent and proper to itself; and that it lives as a parasite in the body of the animal which is affected with carcinoma, deriving its nourishment from this host and doing nothing to repay the host for sustenance of which it robs him. The biology of the carcinoma cell is discussed at great length. Butlin urges that a careful study be made of the life history

of this cell outside the body of the host, and with this end in view repeated attempts should be made to induce the parasite to thrive and to multiply under artificial conditions which will permit the study of every phase of its existence.—*Brit. Med. Jour.*

Causes and Treatment of Arteriosclerosis.

Klemperer describes two cases of arteriosclerosis in men of 37 and 44, who had long smoked from 30 to 100 cigarettes a day, or from 6 to 12 cigars. The circumstances of the cases suggest that the tobacco alone was responsible for the arteriosclerosis. In another man of 45 sexual excesses were likewise the sole etiologic factor that could be discovered. The patient was unmarried and of a robust constitution. A third patient was a man of 35, married for 11 years, with two healthy children 9 and 10 years old. Since the birth of the last child intercourse had been frequent, but exclusively by coitus interruptus. These two cases, Klemperer states, emphasize the importance of the sexual factor in the etiology of arteriosclerosis. He reports in conclusion a case of pronounced arteriosclerosis with enlargement of the heart in a man of 52 somewhat addicted to alcohol and tobacco. The patient took 1 gm of sodium iodid regularly for two years with remarkable subsidence of all his symptoms, the dosage one tablespoonful of a 5 per cent. solution in a glass of milk after dinner. The heart has returned to normal size, and the blood pressure and tension of the vessel walls are much reduced. The systolic murmur has vanished, possibly from regeneration of something abnormal in the wall of the aorta. The patient has eaten ordinary mixed diet without regard to its lime content, but he was advised against carbonated baths.—*Therap. der Gegenwart.*

Formaldehyde Disinfection of the Tubercle and other Acid-fast Bacilli. Spengler (*Zeit. für Hyg.*).

The author expresses astonishment that in so many places formaldehyde should be recommended for the disinfection of tuberculous serum, and points out that one classical method for obtaining pure cultures of the tubercle bacillus is to treat the sputum with formaldehyde, which acts destructively upon the other micro-organisms without destroying the tubercle bacilli themselves; so that when such sputum is transferred to appropriate culture media these organisms are in a condition to vegetate.

The same thing is probably true of all formaldehyde disinfection of tubercle bacilli. The tubercle bacilli are not killed; they are unable to vegetate so long as they remain in contact with the formaldehyde; but so soon as they become removed from it their vegetative and pathogenic power returns.—*Medicine.*

The After-Treatment of Diphtheria.

White (*Journal of the American Medical Association*) tells us that the after-treatment of this disease consists in a sufficient period of rest in bed, and then in watching the effect of mild exercise on the heart, for several months at least, and grading it to meet individual requirements. Tonic drugs, such as strychnine and iron, are occasionally useful.

How rigidly the rest cure must be enforced depends entirely on the individual case. It was found last year in a study of cases in the hospital that it was not necessary to keep all patients in bed who had cardiac murmurs and a pulse which was slightly irregular and somewhat increased in rate. After four or five weeks of rest in bed the cases of moderate severity experienced no ill effects from being allowed to sit up for short and progressively longer intervals, if the heart was carefully watched; frequently the heart's action seemed to be improved by this change.

It has also been the case that many mild cases after leaving the hospital with murmurs and slight cardiac enlargement and irregularity became entirely well in a month or two without special care. The writer believes it would be a mistake to invariably keep these children at home and put them to bed, but over-exertion should be carefully guarded against.

The writer also believes that much of the cardiac dilatation which was often seen in the first few weeks after leaving the hospital could have been avoided by more intelligent restraint of these children at home. Even the milder cases should be carefully watched, and whatever causes shortness of breath, pallor or fatigue, or affects the heart unfavorably by notably increasing the pulse-rate, causing iregularity or any increase in the cardiac area, should at once be stopped, whether it consists of running, walking, playing, or even in simply being out of bed. The heart must be given abundant opportunity to rest and recover its normal function. This is the only conservative treatment and the only way to avoid permanent damage to the heart in some instances.

All the severe cases require rest in bed and careful watching of the heart for months or years afterward.

White concludes that:

1. The cardiac disturbance after diphtheria usually presents the picture of a mitral insufficiency with irregular heart action and few symptoms. Occasional cases have rapid pulse or cardiac irregularity without any other signs.

2. Moderate disturbance of the heart is very common after diphtheria, and in a large number of cases persists from two to six months after the original illness.

3. In many cases the cardiac lesion does not clear up in the first half year, but lasts much longer; some ultimately recover; others probably do not. The duration of the heart trouble is usually in proportion to the severity of the original illness.

4. The fact that children often have few heart symptoms after diphtheria must not mislead us as to the importance of the injury to the heart.

5. Cardiac disturbance of long duration following diphtheria may be entirely recovered from. It is not necessary to give up hope of recovery in individual long cases.

6. The treatment of this condition consists in a sufficient period of rest in bed, and then in watching the effects of mild exercise on the heart for several months at least and grading it to meet individual requirements.

Arterial Angioma of the Scalp.

A very severe case was cured by Krogius (*Centralblatt fur Chirurgie*) by the use of subcutaneous sutures. A curved needle with the eye in the point was passed beneath the mass of vessels and brought out through the skin about an inch away, threaded with one end of a heavy silk suture, and withdrawn. It was then reinserted in the same spot, passed between the skin and the angioma, and brought out at the same opening as before, threaded with the other end of the suture, and withdrawn. A second suture was passed in the same way, the last hole of the first suture serving as the first opening of the second suture, this being continued around the entire proximal edge of the growth; all the ligatures were tied tightly. The angioma almost disappeared after the first operation, leaving only a small mass at its distal part, which was treated in the same manner with complete success.—*Therapeutic Gazette.*

Recovery from Diabetic Coma under Alkaline Treatment.

The alkaline treatment of diabetic coma is theoretically sound, but the number of cases reported in the literature in which recovery has followed the administration of alkalies is

only sixteen, an abstract of which is given. The cases include all grades of coma, and are accepted on the authority of the reporters. The diagnosis does not appear to have been established in a number of instances. In some cases the histories do not harmonize with the usual symptoms of true diabetic coma. The diagnosis of threatened coma is not always easy. Disturbances of digestion and general depression may precede its onset, but it is not a necessary sequence, and recovery from such conditions has not infrequently occurred spontaneously. The alkaline treatment is certainly a remedy for diabetic coma, as acid intoxication is its cause. The proper administration of alkalies will sometimes indefinitely postpone the onset of coma, and it will occasionally arrest its progress at the beginning, and in some rare cases rescue a patient from its fully developed stages. The alkalies are purely symptomatic remedies which combat effects and not causes. They can only be of use before changes in the tissues have occurred. Acting as a chemical antidote, it is necessary that the dose of alkalies should be sufficient to neutralize the offending acids. The greater success reached in the treatment of children is probably due to the larger amount of alkali employed. Various routes have been employed for the introduction of alkaline solution, and all have been followed by successes. Hypodermic injections are usually followed by suppuration and necrosis. The intravenous route is free from this danger, and its stimulant effect may be of great advantage.

The patient observed by the writer was thirteen years old, and he had been under observation for four months, during which time he had suffered from excessive hunger and thirst and had passed large quantities of urine. His strength had steadily failed, and the weight had fallen from 79 to 55 pounds. At the time he was admitted to the hospital he was semicomatose. The breath smelt strongly of acetone, the skin was harsh and branny, with a purpuric eruption. The extremities were cold and cyanotic. The pulse was rapid and barely perceptible, the temperature 99 deg. The pupils were dilated but reacted to light. The urine contained 5.3 per cent. of sugar and a trace of albumin. Acetone and diacetic acid were present. Directly after his admission he was given eight ounces of sterile salt solution, in which bicarbonate of soda was dissolved almost to the point of saturation, under the skin of each breast. An unsuccessful effort was made to give the alkaline solution by the bowels. A heaping teaspoonful was added to a tumbler of water and was given by the mouth to the

limit of the patient's capacity. No record of the amount was kept, but as thirst was great large quantities were taken. The stupor rapidly decreased, but the patient was drowsy for several days. Convalescence was interrupted by uremic convulsions, which were accompanied by a marked diminution in the quantity of urine. In spite of the large doses of alkali the urine remained persistently acid throughout the patient's stay in the hospital. The sugar varied from 1 to 3 per cent. under a diet which contained a little bread and considerable quantities of milk. Acetone was more frequently present in the urine than absent, but its odor persisted only a few days after entrance. Suppuration occurred at the site of the hypodermic injections. The abscesses were long in healing.—G. G. Sears, *Boston Medical and Surgical Journal.*

A Case of Recovery after Talma's Operation.

In November, 1904, the writer was consulted in a case of ascites due to cirrhosis of the liver. The patient had to be tapped every two or three weeks, removing each time from three to five gallons of fluid. In the operation the method advocated by Talma was followed. The abdomen was opened between the umbilicus and the ensiform cartilage, evacuating the accumulated fluid. The liver was rubbed with a nail-brush until there was a slight hemorrhage, and the peritoneal covering of the diaphragm was treated in a like manner. Five sutures of forty-day catgut were used in stitching the abraded surfaces of the liver to the abraded surface of the diaphragm. Five or six loops of omentum were then stitched to the peritoneum, and they were also included in the sutures which closed the abdominal incision. The establishment of collateral circulation was slow, and the patient was tapped three times before it was complete. The accumulation of fluid in the abdomen became less, and in three months the patient resumed his occupation. The patient has gained about twenty-eight pounds in weight, and his nutrition is good. As yet only eight months has elapsed since the operation, and it is too soon to affirm positively that the recovery is perfect, but the results are sufficiently so to justify the operation in properly selected cases.—G. C. Stemen, *New York Medical Journal.*

Treatment of Pityriasis Versicolor.

P. Gallois, in a communication to the Therapeutic Society of Paris, recommends a solution composed of peroxide of hydrogen, eight ounces, to which is added one drachm of borax. The daily application of this lotion will remove the unsightly stains of this disease in about two weeks.—*Medicine.*

Miscellaneous.

Hospital Economy.

The question of hospital economy is one that is of great interest to many practitioners. Dr. Gerster, of New York, in discussing this subject in a recent number of the *Medical Record* first compares the daily cost per patient in different hospitals in this country and Europe, the result showing that in America the outlay is very much greater. These facts serve as arguments in favor of the view that in order to meet successfully the conditions now existing, when the large hospitals usually show an annual deficit, retrenchment is the proper remedy, and not an appeal for greater liberality on the part of the comparatively few philanthropists who furnish most of the funds for the hospitals. In analyzing the conditions which underlie the extravagance and waste in hospital management in this country, the author emphasizes the necessity for more active participation in the executive control by the members of the medical staff. The plans of organization of the great hospitals of Hamburg, Berlin, Vienna, and Budapest are described in detail. The essential features are that the position of the lay superintendent is occupied by one or more salaried medical directors, the attending staff is very limited, so that the service is a permanent one with salaried visiting physicians and surgeons, and the house staff also is composed of paid assistants, whose positions are permanent. In this way all those concerned are able to give the necessary time to details of economical management, and also acquire the experience necessary to carry them out with effect. The present plan of conducting hospitals here resembles that in use in medieval Europe, and the author predicts that sooner or later a system similar to that now employed in Europe must be adopted. While opposition to reform in this direction is to be expected, restriction in the number of those who attend at our hospitals is essential to economical improvement, and is urgently required also to effect a betterment in the care of the individual patient. —*Medical Age.*

The Relation of Pleurisy to Tuberculosis. VON RUCK (*N. Y. Med. Jl.*)

Formerly the pleural cavities were regarded as exceedingly well protected against localization of bacteria, not only because of the protection afforded by the chest wall, but because the lymphatic system of the lungs was supposed to carry centripetally away from the pleura everything otherwise liable to

reach it. More recent investigations and clinical observations lead to opposite conclusions. After weighing the data at hand the author concludes that the pleural cavities are *readily* accessible to bacterial invasion, and that the great majority of pleurisies with effusion are due to infection with tubercle bacilli. This is proved by autopsy findings, methods of exact diagnosis and subsequent clinical histories. The so-called idiopathic dry pleurisies are likewise usually tuberculous.

The subjective symptoms of inflammation of the pleural apices often simulate those of myalgia or rheumatism.

Tuberculosis should be suspected in every case of pleurisy or persistent pain in the chest or shoulder which cannot be ascribed to other causes, and if the physical examination proves negative, the patient should be regarded as tuberculous, and should be kept under careful observation. The tuberculin test may be relied upon to confirm or exclude the tuberculous nature of pleurisy in case of doubt.

The application of these principles will lead to an earlier recognition of tuberculous disease of the lungs, and to the institution of a treatment at a period which will in many cases secure to the patient most important advantages in his prospects for recovery.—*Interstate Med. Jour.*

The Medical Man, Anno Domini 1906.

The rapid evolution of scientific medicine presents us with an ever-shifting kaleidoscope of professional knowledge. The practitioner of to-day, no matter what his standing or his peculiar bent, must keep abreast of main advances, or in a few years he will find himself lagging hopelessly in the race. In so wide a field he cannot hope to know particularly more than one or two branches and to have a general acquaintance with the rest of the multitudinous subjects that fall within the range of modern medicine. Indeed, it seems almost hopeless for the general practitioner, burdened as he is with incessant calls upon his energy, to keep himself well educated from the professional point of view. Even where post-graduate education is at hand, it requires no little determination to find the necessary time to attend classes and demonstrations. The medical diplomate or graduate is turned out from school or university a highly finished educational product, charged with a vast amount of information that will be simply an encumbrance to him when called upon to discharge the end and aim of his adopted career, namely, to comfort and heal the sick. There are several saving clauses, however, in the compact be-

tween general practice and medical science. The first is that while great, and in some cases enormous, strides have been made in the various branches of medical science and art, that of therapeutics has for the most part lagged behind with slow and halting steps. A lecturer will discourse eloquently upon the etiology, the pathology, the symptomatology, and the diagnosis of some condition, while the therapeutic aspect is disposed of in the last two or three minutes of his allotted hour. Yet treatment is the all-important thing for the future practitioner, not to mention the patient, an interested person of whom we are apt to lose sight at times in the excitement of our scientific ardor. Of what use is it to the medical attendant when sitting at the bedside of a sick person to ransack his mind as to Professor So-and-So's refinements and subtleties of diagnosis? Sick-room practice and laboratory research are for the most part poles asunder, and in the rough and ready tumble of general practice the advance has been made at a few points here and there rather than all along the line. So the general practitioner treats symptoms, trusts to a few approved remedies and throws advanced science to the winds—at any rate, until its advocates can furnish a convincing as well as a plausible case. In fact, he has been taught the lesson that much so-called knowledge is not really knowledge when tested in the crucible of experience. An amusing instance of misapplied high standard smartness recently occurred in a provincial centre of light and leading. A country surgeon sent a lad to the hospital of a neighboring town for the purpose of having a deep-seated abscess opened. A country surgeon sent a lad to the hospital professor of world-wide fame, but he was sent back home without operation because an examination of his blood did not afford the evidence deemed necessary for the diagnosis of internal abscess. Thereupon the country surgeon called in a brother practitioner to give chloroform, and speedily relieved his long-suffering patient of his dangerous burden. The truth of this story, however much it may be suggestive of science run mad, is vouched for on the best authority. It illustrates one of the more disquieting sides of professional life nowadays, namely, the decay of skilled clinical observation, and the exaltation of laboratory methods that are in not a few cases complicated, fallacious, and technical to a degree.—*Medical Press and Circular.*

Mark Twain's Rules of Health.

On the occasion of his seventieth birthday the great American humorist took occasion to call attention to the methods by

which he has secured the psalmist's three score and ten years. He has been regular about going to bed and getting up, making it a rule to go to bed when there wasn't anybody left to sit up with, and to get up when he had to. He had been consistently regular in his early years in taking food that frequently disagreed with him. In regard to smoking, the only restriction he has imposed is to smoke one cigar at a time. He is not quite sure when this habit was contracted, but some time prior to his eleventh year it was resorted to secretly, and since that time he has been an open and avowed smoker. In reference to drinking he prefers to remain dry excepting when others are about and there is drinking going on; then he likes to help. He does not recommend this practice to others, as he points out that dryness does not hurt him, but might easily injure other constitutions. He says: "I have never taken any exercise except sleeping and resting, and I never intend to take any. Exercise is loathsome, and it cannot be of any benefit when you are tired; I was always tired. I have lived a severely moral life, but it would be a mistake for other people to try it or for me to recommend it; very few would succeed. Morals are an acquirement like music, like a foreign language, piety, poker, or paralysis. No man is born with them; I wasn't myself, I started poor."

We are not quite sure that the remarks of Twain are very illuminating or that they conduce very much to longevity, but they are up to the average level of those who have attained to advanced years, and who undertake to enlighten others on how they did it.—*Medicine.*

The following points and suggestions regarding the prevention of consumption, which deserve the attention of everybody, are gathered from a recent article by Dr. Knopf, of New York, which is to be found in the *Medical Record,* of November 18th, 1905.

"There are more cases of advanced tuberculosis to be treated than any other disease.

"There is no disease where so much can be done to render the patient comfortable and hopeful as pulmonary tuberculosis in the advanced stage.

"There is no disease where one case in a family can more readily become the cause of infection of other members, particularly in the stage where the consumptive begins to be confined to the close association of the family members only.

"It is extremely important to remember that advanced

consumptive patients who are able to go about, perhaps able to work at their ordinary calling in the office or factory when ignorant or careless, constitute the greatest danger to the health of the community. They must be considered as the most frequent cause of infection. The careless, ignorant or helpless consumptive when confined to bed can do little more than infect his room, but the advanced patient able to follow some calling can, if he is careless, scatter 7,000,000,000 bacilli every day with the greatest ease.

"Of all tuberculosis patients he should be the most carefully instructed, and should be most deeply impressed with the fact that carelessness in the disposal of the sputum is dangerous to himself as well as to his neighbors.

"As yet people generally have not been educated up to the point at which they are willing to carry and use a pocket flask or cardboard purse. Being desirous to conceal their condition, they are extremely reluctant to do anything which would call attention to their infirmity. Some way less likely to cause remark must be found. Probably the best that can be done in the meantime is to suggest that tuberculous men should have two pockets lined with some material which can be easily cleaned, and that they should carry in one of these pockets very cheap handkerchiefs, or bits of cheesecloth, or other cheap material cut like handkerchiefs, which when used can be put into the other pocket and there kept until the close of the day when they can be easily destroyed or sterilized by boiling after their return home. In this way they can escape observation, and at the same time secure their fellow-workmen and associates against danger. When so simple a precaution as this, and one so easily within the reach of every right thinking man, is available, not to make use of it would seem to be little less than criminal neglect."

Youthful Marriages in Manitoba.

A marriage license recently reached the Department of Agriculture at Winnipeg from a Galician settlement, which gave the ages of both contracting parties as only twelve years, and as a result the legislature passed a bill amending the marriage laws so that no one can marry under twelve, and up to the age of eighteen the consent of the parents must be received.

It is wrong to perform any radical operation for an ulcer of the tongue without preliminary microscopical examination. Clinical symptoms, no matter how typical, are often misleading.—*American Journal of Surgery.*

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Original Communications.

THE PRODROMATA OF INSANITY.*

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Some years ago a paper, bearing a title very similar to that upon which I now venture, was presented before the Harveian Society of London by one of England's most eminent alienists. The subject was dealt with comprehensively, and so great a variety of symptoms prodromal to mental disease were presented that, it is said, every one who heard the paper went away in a great state of perturbation; every one discovered that he possessed, on his own account, some of the symptoms indicative of oncoming insanity. In the face of such an experience, by one whose fame is for all time established amongst those who favor psychiatry, it surely requires courage, as well as presumption in me, to come before you with a paper on the prodromata of mental disease.

Lest you fear that you may, like those of the Harveian Society, be stimulated to an unpleasant degree of introspectiveness as my paper proceeds, a disclaimer of evil intent at the outset may be reassuring. There is to be no attempt at exhaustiveness in this paper. It will not venture even a superficial glance at the whole psychiatrical field, but will deal only with the more common forms of mental derangement—those with which the general practitioner is more or less intimately acquainted. And because it is presented by one whose

*Read before Canadian Medical Association, Halifax, August, 1905.

work is done in a hospital for the insane, it must not be regarded as authoritative, for the asylum physician has little opportunity of learning about the earlier manifestations of insanity, which necessarily come under the observation of the general practitioner. As a matter of fact, we of the psychiatrical specialty, after a long period of observance of our medical brethren who exploit other lines, have concluded that it is time that we, too, assumed the convenient expedient of poking the responsibility for our ignorance upon some other branch of the profession, and the special reason for bringing my paper into being is to secure an opportunity to call the attention of the family doctor to the splendid opportunity he has of contributing towards our enlightenment by thorough study of early symptoms and careful estimate of their relative importance. The majority of patients coming to institutions for the insane are incapable of giving a reliable account of the development of their disorders, and the asylum physicians must necessarily depend almost entirely upon the histories which accompany patients. The meagreness of such histories frequently bears testimony, of the silent yet eloquent sort, to lack of interest in mental cases on the part of many physicians in general practice. Yet it is generally conceded that no other illness compares in fatefulness with mental disease; there is none which causes greater distress to friends; none more dreaded, or from which recovery is more devoutly to be wished for; and none which more intimately touches individual, family and nation, or which is of greater import from sociologic or economic viewpoints.

When with these facts we have also to consider that insanity is rapidly increasing in civilized countries, and that it is a condition which is often arrested in its incipiency, we have surely a sufficient combination of reasons why the general practitioner should regard mental disease as of no less importance than other conditions which he is called upon to treat, and should lead him to a careful study of mental abnormalities.

It is rather a peculiar circumstance that the majority of physicians are especially interested in the one form of mental disease from which there can be no recovery—general paresis. It is very desirable that an early diagnosis should be made in this disease, because of the fact that it often manifests itself in a profligacy which may bring financial ruin to patient and family, or in a moral lapse which may lead to unfortunate legal complications, and cause great mortification to friends.

Physical symptoms, especially pupillary phenomena, tremor of lips and tongue, exaggeration of knee-jerk and some blunting of cutaneous sensibility, are commonly to be determined very early in the disease, and are of such diagnostic importance that they should always be looked for in an individual approaching the age of thirty-five or forty, whose general behavior has undergone notable change.

It is not generally recognized that the type of general paralysis has undergone considerable variation of late, and that the mental manifestations are often those of nervous exhaustion, rather than the expansiveness and grandiosity which have colored the classical picture of the disease. Frequently there are early complaints of disordered digestion, lack of energy, disturbed sleep, difficulty in concentrating thought, failure in memory and uneasy sensations in the head, which are told with such an air of concern and with such minuteness of detail as to convince the physician that he has a case of neurasthenia to deal with, and should a careful physical examination be omitted the real condition may be quite overlooked. The danger of this error is increased because of the fact that general paralysis is very prone to occur just at the "neurasthenic age." In some instances the earlier stages of general paralysis are characterized by mental depression, and one might at first think he had melancholia to deal with. The physical symptoms are really the only constant ones in the disease, and they should always be looked for in the first examination of any mental patient. There is, perhaps, no form of alienation in which it is more desirable to have the patient committed to an appropriate institution at the earliest possible moment. Certain it is that if we are ever to escape from the unvaried fatality with which the disease has thus far confronted us, we must diagnose at the very beginning and institute treatment at once.

Several recent writers have attempted to trace a close analogy between general paralysis and a condition which is especially apt to appear during the years of adolescence—the dementia precox of Kraepelin's conception. The term dementia precox is not ideal, but so large a company of authors have heaped their criticisms upon it that there appears to be no further need for abusing it, and so it is accepted for the purposes of this paper. The condition is one which, in its earlier stages, may present itself in at least two, and possibly in three forms, but it is generally characterized throughout its course by a peculiar suspension of emotional activity, and nearly always ends in a state of profound apathy and indif-

ference, rendering the patient quite unfit for anything but institutional life. It is a very common form of mental disorder, including a considerable majority of all cases occurring under twenty-five years of age, and offers an extremely unfavorable prognosis. It seems, moreover, to have been rapidly increasing in frequency of late years. For these reasons, and also because it contributes the greater proportion of the dements to the population of our asylums, it is a variety of mental disease which should receive most earnest consideration.

Just as a blunting of the moral sense may be one of the first signs of general paralysis, so the development of bad habits may be prodromal of dementia precox. A reasonless depression is also an early symptom in a fair proportion of cases. Lack of attentiveness, frequently recurring dreamy states, and especially failure to show natural affection for and interest in parents and friends, are very suggestive symptoms. A state of depression, accompanied at the very onset by vivid hallucinations or confused delusions, generally indicates dementia precox. A tendency to silly laughter and grimacing, flightiness and weakness of judgment are all more or less indicative of this disease. It is not until the condition has become very advanced that failure in comprehension or impairment of memory becomes noticeable.

Kraepelin limits the use of the term melancholia to cases showing a rather characteristic depression, and which generally appear in the involutional period—either coincident with or following upon the climacteric. Apprehension and depression are constant features, but delusions need not be present, and there may, in fact, be no intellectual defect until the condition has lasted for a long time. Such patients often suicide in spite of the absence of delusions; a fact which is attested to by a long list of self-ended lives. The early recognition of the disorder is consequently of great importance. Amongst the symptoms which first become manifest, certain sensory symptoms deserve consideration. One of these is headache, or, perhaps, more correctly, a peculiar distressing sensation, which is usually persistent and not relieved by sleep, which is often accompanied by variously described paresthetic sensations and sometimes by vaso-motor disturbances, and which has often associated with it a feeling of weariness and incapacity, and an indefinable fear. Insomnia is another early symptom, which, while by no means limited to melancholia, is especially important in connection with this disease. It should always receive most careful attention. Loss of muscular tone, with

a feeling of weakness and a flabby state of the muscles, class amongst the prodromal symptoms of melancholia, and constipation—frequently of a most obstinate type—is extremely common. Digestive disturbances, with consequent nutritional defect and loss of weight, often coexist. The mental symptoms appear gradually, as a rule, and slowly increase in intensity. Some emotional depression may be noted early, but memory remains good for a long period, and the patient is frequently able to talk intelligently and usually without manifest effort during this time.

In the forms of insanity which tend to recur, there is offered an especially good opportunity for studying the early symptoms. The recurrent manias and the recurrent melancholias of the older writers have, with certain other psychoses, been grouped by Kraepelin under the term manic-depressive insanity. The applicability of this term becomes apparent to any one who has had an opportunity of studying several attacks of mental disease in a single individual, for it is found that each attack presents features of its own, that some are especially characterized by exaltation, others by depression, while still others show an admixture of exaltation and depression, and yet, as far as can be determined, the pathologic condition is the same in each instance. The symptoms premonitory of either phase of this psychosis may be divided into objective and subjective. Among the objective symptoms which often indicate the advent of a maniacal attack may be cited unusual alertness, quickened muscular reaction (especially indicated in unusually rapid play of the muscles of facial expression and of gesturing), a tendency to over-activity, and often an improvement in the general "set-up" of the individual. There are sometimes attacks of muscular twitching, sometimes tremor—especially when finer movements, such as those of writing, are attempted, and very often an unusual degree of loquacity. Subjective symptoms of an approaching manic attack include a feeling of unusual well-being, widened and increased interest in the affairs of life, and apparently lessened need for food and sleep. These symptoms may be present for some time without there being any noticeable flaw in mental action; in fact, the period may be one characterized by exceptionally good mental work. But if they are abnormal to the individual, and especially if there be predisposition to mental disease because of heredity or a previous attack, they are strongly presumptive of oncoming excitement.

While, in a general way, objective symptoms predominate

before an attack of excitement, subjective—or in other words sensory—symptoms are most prominent in antecedence of depressed states of mind. A series of symptoms may precede the depressed phase of manic-depressive insanity, which correspond very closely with those which have been described as premonitory of melancholia. Comparative youth, a bad inheritance, and especially the history of a previous attack of mental trouble, point to the depressed phase rather than to melancholia, and an early appearance of indecision and of loss of capacity for effort, add to the likelihood that an attack of the depressed phase of manic-depressive insanity is impending.

Many attacks of mental trouble have their incidence in an attack of acute bodily illness. The various febrile psychoses, and some of the cases of collapse, delirium, etc., are especially to be thought of in this connection, but an attack of manic-depressive insanity, melancholia, or dementia precox, may be determined in this way. The infectious diseases are most likely to be followed by mental disorder, and typhoid seems to be particularly apt to leave behind it a mental warp. Sometimes the mental symptoms so obscure the clinical picture that the underlying general disease may be overlooked. Psychical enfeeblement in the spheres of comprehension, thought, memory, emotion and action, suggest a coexisting physical condition, making its damaging influence felt in all these directions, and it is especially associated with an acute infection that such mental symptoms are found. Occasionally mental symptoms may really antedate other symptoms of an acute febrile process.

My paper is intended to be suggestive. Enough has been outlined to show that, even with our present knowledge, the watchful family doctor may often be able to detect mental disorder in its incipiency—when the greatest likelihood exists of improvement under treatment. Of course in estimating the importance of prodromal symptoms, one should give full value to the natural temperament of the individual. In a predisposed individual, such symptoms as have been noted may be of the most serious import, while in one whose family history and personal past are good, they may mean but little. It may at times be very difficult to determine when one has to deal with prodromata and when with an actual attack. Much observation will be necessary before our knowledge will have attained anything like a satisfactory degree of accuracy.

GASTRIC ULCER.*

By JOHN FERGUSON, M.A., M.D.,
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I. Historical.

Gastric ulcer is no new disease, nor is its recognition of recent date. Hippocrates treated Pericles for gastric pain, and speaks of black vomit and other symptoms that point to the fact that he had met with cases of gastric ulcer, though he did not recognize the ulcer as the cause of the pain, vomiting and hemorrhage. The same can be said with regard to Galen. Many centuries elapse before there are any positive statements of the recognition of gastric ulcer. When the sixteenth century, however, is reached some very clear and specific records of cases are to be found.

During that century John Bauhin mentions the case of a young woman who died of a perforated ulcer, the stomach after death containing blood, and the abdominal cavity gas, fluids and remnants of food. Another case is recorded by Donatus to the effect that the coats of the stomach were eaten through near the pyloric opening. There are other instances of ulcer with perforation, callous cicatrices, hemorrhages, and one with a fistulous opening, found in the writings of that period; and also several instances of deformity of the stomach, such as transverse contraction, attributed to gastric ulcers. Among the writers who have handed down to us descriptions of such cases may be mentioned Sommering, Morgagni, Mangold, and others who practised and made dissections during the seventeenth and eighteenth centuries.

Voigtel gave a very careful account of the disease in the early part of the eighteenth century. He states that these ulcers may be surrounded by hardened edges, but at other times such a condition is absent; there may be a perforation, and the stomach walls look as if a piece had been cut out. At times the gastric tissue is contracted and condensed. Such language approaches very closely in accuracy to that employed by modern pathologists. Towards the close of the same century Matthew Baillie gave an excellent account of gastric ulcers with many well arranged clinical observations, and some good illustrations, drawn from his own post-mortem investigations. About the same time the Italian physiologist,

* Read at meeting of the Toronto Medical Society, February 1st, 1906.

Spallanzani, advanced the view that ulceration of the stomach was due to a process of self-digestion. This view was also urged by the celebrated John Hunter, who held that they were due to erosion of the stomach walls by the gastric juice.

But this view fell into disfavor, and many crude theories were offered to account for the ulcerative process. In the early years of the nineteenth century Carswell and Morin again took up the question and urged that the disease was the result of chronic inflammation of the stomach, derangement of the circulation in its walls, and the action of its own secretions. One of the most interesting events in the history of the subject is the report of a case in 1818, when Chaussier proved that a death was due to perforation after chronic ulceration, and not to poison as alleged. In the second and third decades of the eighteenth century, four names stand out very prominently as having added much to our knowledge of gastric ulceration, namely, Lainé, Rauseh, Cruveilhier, and Abercrombie. In the writings of these observers it is apparent that simple ulcer was sometimes confused with malignant disease, but we also learn from their writings that care should be taken to clearly differentiate death by perforation from death by poison. This was a distinct advance in our medico-legal knowledge. In 1829-35 appeared the volumes of Cruveilhier's pathology. They contain an amount of material of an anatomical, pathological and clinical character which place him in the very front ranks among the great medical names of the world. He points out acute and chronic ulcer, cicatrisation, contraction, perforation, hemorrhage, malformation of the pylorus, and many other facts now well known and admitted.

This brings the historical study of the subject down to the time of the later pathologists, such as Rokitansky, Virchow and Trousseau. The first of these gave a description of the anatomical appearances that must ever remain as models of their kind. In 1885, Virchow announced his famous views on the necrotic origin of ulcers caused by hemorrhages into the mucous membranes. This view was taken up by many others and much experimental work was performed to prove that ligation of the portal vein and the various gastric arteries caused ulceration of the stomach walls; and here the names of Müller, Pavy, and Ebstein are worthy of special mention. Before passing from this brief review of the historical study of gastric ulcer, it is only fair to state that the term ulcus ventriculi was first employed by Peter Frank, about 1800.

Surgical intervention for gastric ulcer dates from Rydygier's operation in 1881.

II. Etiology.

In 1786 John Hunter taught that the gastric juice did not attack the healthy mucous membrane, because of a specific property of the living cells which he called "The vital principle." No better explanation for the immunity of the mucosa of the stomach to the action of its own secretion has ever been offered. Bernard held that the non-digestion of the mucous membrane was due to the property in the epithelium that prevented the absorption of the gastric juice. Stricker thought that the mucus formed in the stomach protected its surface. Pavy claimed that the alkaline blood prevented the digestion of the stomach tissues. Hunter's and Pavy's views are the only ones that have the weight of clinical and physiological evidence in their support.

In the great majority of cases of gastric ulceration there is a state of hyperchlorhydria on the one hand, and anemia and reduced blood alkalinity on the other. It is quite true that there are cases of gastric ulcer in which the amount of hydrochloric acid is below normal; but there must be present some offsetting condition that enables such a type of gastric juice to act upon the gastric mucosa.

From clinical observation, post-mortem investigation, and experimental research, it has been accepted as established that the following conditions play the most important part in the etiology of ordinary ulceration of the stomach:

1. Hyperchlorhydria, hyperacidity, or hypersecretion of the gastric juice.
2. A reduced vitality, or lowered resistance of the mucous membrane.
3. Changes in the blood, such as reduced alkalinity in chlorosis.
4. Some form of local bacterial infection, causing thrombosis, embolism, or necrosis of tissue.

Under one or other of these headings almost every case of gastric ulcer can be classified. Instances of the disease, due to the swallowing of some corrosive chemical or overly hot liquid, or to injury from a spicula of bone, a blow from without, or certain occupations causing pressure, would come under the division of reduced vitality or lowered resistance on the part of the mucous membrane, which would permit of the self-digestion of the enfeebled portion of the mucous surface by the contained gastric juice.

Some authors contend that many instances of gastric ulcer are due to infection by some micro-organism. The methods by which these organisms act are now much better known than was the case a few years ago. It is admitted that they may cause thrombosis or embolism of the vessels, or establish a local inflammation in the glands of the stomach, with far-reaching consequences on the vitality of the part affected, and the readiness with which it may break down into an open ulcer. Robson and Moynihan are of the opinion that most cases of ulcer of the stomach are of septic origin, a view that is likely to gain in favor.

Age and sex are potent factors in the etiology of gastric ulcer. It is a matter of common clinical knowledge that women suffer most frequently, and during the menstrual period of life. This may be due to their occupation in domestic capacities for servant girls often suffer; or it may be caused by the chlorosis so common among young women, giving rise to an altered condition of the blood, with a lowering of its salts and an increase of the hydrochloric acid in the gastric juice; or it may, again, be brought about by the periodic congestions of the abdominal viscera before, and their depletions after each menstruation. The decaying of the teeth, the changes constantly going on in the pelvic organs, the events incident to childbearing and nursing, all open up many avenues for sepsis, as well as for changed states of the blood and the gastric juice. This is the period of life in which Virchow's theory that thrombi and emboli are principal causes, may fairly be admitted as having a large measure of truth in it.

At a later period of life, but in a very different way, the vascular system may play a very important role in the causation of the disease. As the result of "the strenuous life," alcoholism, lead poisoning, syphilis, gout, auto-intoxications, and the many infections, the arterial system begins to undergo degenerative changes. Arterio-sclerosis is now no longer regarded as a condition affecting the radials and a few of the peripheral arteries. It is admitted to play an important part in the causation of many visceral affections. The brain, the kidneys, the digestive organs, all may suffer. In this way may readily be explained the blocking up of some of the channels of blood supply to the stomach, and a local lowering of the vitality and resistance that ends in the formation of ulcers, such as we know to occur in men who have passed mid life.

Whatever views may be held on the resistance of the tissues in the etiology of gastric ulcer, and how a lowered resistance may be brought about, there can be no two opinions on the part played by the gastric juice itself. It has long been recognized that true gastric ulcer only occurs in such parts of the alimentary canal as are reached by this fluid, namely: The lower end of the esophagus, the stomach, the duodenum, and the small intestine in the case of a gastro-enterostomy. With truth these erosions have been called peptic ulcers.

Speaking more specifically with regard to age, the following table from Welch is very instructive:

Age	1-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	over 100
No. of Cases	1	32	119	107	114	108	84	35	6	....	1
Totals	33		226		222		119		7		

In the matter of sex and location, it has been noted that ulceration of the stomach is twice as frequent among women as among men, whereas in the case of duodenal ulcers four males suffer to one female.

III. Varieties and Site.

It has long been known that gastric ulcers assume a variety of clinical forms, each with its characteristic anatomical features. W. H. Welch has classified them thus:

1. Latent ulcers without symptoms, and discovered only at an autopsy.

2. An acute form of ulceration which ends in speedy perforation, with few symptoms or none, preceding the fatal attack.

3. The hemorrhagic form, in which, after a brief course, and, perhaps, with few symptoms, there is a severe loss of blood.

4. The gastralgic form, in which there is dyspepsia with pain and vomiting as the leading symptoms.

5. A chronic hemorrhagic form with recurrent attacks of bleeding, accompanied by pain, vomiting, and other symptoms.

6. A form in which there is severe cachexia. This is usually the terminal stage of one of the other forms, but may come on rather acutely, as if the disease was a rapid cancer of the stomach.

7. That form which runs a very chronic course, with periods of apparent recovery, only to be followed by relapses, or the formation of new ulcers.

8. Those cases in which there is the formation of much cicatricial tissue, causing stenosis of the pyloric opening, or contortion of the stomach, such as hour-glass contraction.

In addition to the foregoing clinical types there are the anatomical characteristics which belong to the acute and the chronic forms. In the acute gastric ulcer the lesion is usually small, and it presents a clean-cut, funnel-shaped appearance, as if the tissue had been punched out. There is no induration and the surrounding parts are smooth and normal. The chronic ulcer, on the other hand, is usually larger and generally presents indurated edges which have lost the clean-cut, sharply-defined appearance of the acute ulcer.

Ulcers may vary greatly in depth, from the merest superficial erosion to those which spare only the peritoneal layer, or effect a complete perforation of the viscus.

In about 20 per cent. of all the cases there are more than one ulcer. With regard to location they may be divided thus: 37 per cent. on the lesser curvature; 30 per cent. on the posterior wall; 12 per cent. on the pylorus; 9 per cent. on the anterior wall; 6 per cent. at the cardiac end; and 7 per cent. on the fundus and greater curvature. About 5 per cent. of all adults show, by autopsy, to have had gastric ulceration.

IV. Course and Sequels.

The course of gastric ulcer is very varied, from the most acute to the very chronic types. Statistics show that about 75 per cent. of all the cases recover. The actual death-rate has been variously estimated by different writers. Leube admits a death rate of 25 per cent.; Lebert, 10 per cent.; Welch, 15 per cent.; Fenwick, 20 per cent.; and Bulstrode, 18 per cent. Hemorrhage causes death in from 3 to 5 per cent. of the cases, and perforation in from 6 to 10 per cent., according to the investigator.

Apart from hemorrhage and perforation, gastric ulcer may give rise to a number of very serious sequels, such as cicatricial stenosis of the pylorus, hour-glass contraction of the stomach, the occurrence of cancer on the site of ulcer, the formation of chronic abscess, and the development of a progressive form of anemia. It is not known how often these sequels follow ulceration of the stomach. In the case of cancer, however, considerable thought has been given to the subject; and with

the result that cancer is found to occur generally in the same parts of the stomach as do ulcers. In very many of the cases of cancer of the stomach, there is the history of a precancerous period, which most clinicians regard as indicating the presence of an ulcer. Some writers, particularly Talma, contend that at least 13 per cent. of the cases of ulceration of the stomach become malignant. Chronic, deep ulcers in the posterior aspect of the stomach may form adhesions prior to the occurrence of perforation, and thus give rise to an abscess, the usual subphrenic variety. Such adhesions may form when the ulcer is otherwise located than on the posterior wall, though very much less frequently.

Stenosis of the pylorus and hour-glass contraction of the stomach are among the most common and troublesome of the sequels of ulceration. The pylorus, though not actually involved in the diseased process, is usually found contracted, but the stenosis, which is a sequel to ulceration, is the true organic narrowing of the passage, due to the shrinkage of scar tissue. This narrowing may be very extreme and practically prevent the passage of the contents of the stomach, except its more liquid portions. A second effect of this stenosis is a gradual dilatation of the stomach, with all the digestive disturbances that such a misfortune brings in its train.

With regard to hour-glass contraction, it must be admitted that the condition is much more common than it was at one time thought to be the case. This condition was formerly regarded as of congenital origin, but it is now known to be almost invariably caused by ulceration of the viscus, or by malignant disease, the result of such ulceration. The constriction is usually about the middle of the stomach, but there may be more than one contracting band. The disturbances to digestion caused by this condition are very distressing. The normal peristalsis of the stomach is seriously interfered with, The cardiac pouch not emptying itself properly, the products of digestion in it undergo decomposition, and this portion of the stomach becomes dilated. In that portion of the stomach between the constriction and the pylorus there is often an accumulation of the most foul character imaginable, which frequently regurgitates into the cardiac pouch, and may then be vomited, or keep up a state of fermentation and the eructation of offensive gas.

Another sequel to gastric ulcer is the occurrence of a severe and pernicious form of anemia. This may be due to chronic

sepsis from decomposition of the stomach contents, to frequent loss of blood, to faulty digestion and malassimilation, to the development of malignant disease where an ulcer had been, or to the train of nervous disturbances that may follow ulceration and their effects upon metabolism and nutrition.

V. Symptomatology.

The symptoms of gastric ulcer vary very much, but there are a number which are sufficiently constant to enable a diagnosis to be made with a strong probability of accuracy.

1. *Hemorrhage.*—This is a very constant symptom of ulcer of the stomach, and occurs in a large proportion of the cases. The amount lost may be slight, or profuse; and may occur once, or be repeated many times. It has been estimated that 3 per cent. of all patients who suffer with gastric ulcer die of hemorrhage; and that according to different authors from 50 to 80 per cent. vomit blood. Probably every case of the disease is accompanied by more or less hemorrhage, either vomited or passed by the bowels, giving rise to the melena stools. This table, from Hemmeter, gives the distinguishing features between hemorrhage from the lungs and the stomach:

Lung.	Stomach.
1. Blood bright red, foaming.	1. Blood is dark red, partly coagulated, frequently mixed with food, sometimes acid.
2. Physical signs point to a pulmonary or cardiac affection, the stomach may be affected secondarily.	2. Physical examination evinces a gastric or hepatic affection, or stasis in partial circulation.
3. Pulmonary hemorrhages followed by rusty-colored sputa for days (generally), but there is no blood in the stools.	3. Gastric hemorrhages are frequently associated with tar-colored stools.
4. Physical signs of pulmonary or cardiac disease, moist rales, etc.	4. Physical examination of heart and lungs usually negative.

2. *Pain.*—This is a very constant symptom. It is described as a burning, gnawing, boring, tearing, or pressing character, situated in the epigastrium, or felt in the left side of the lower dorsal region. In some cases the pain is very severe, amounting to the most acute distress. It comes on usually soon after taking food, and gradually increases until the stomach is emptied by vomiting by the usual course of digestion. The pain varies with the character of the food, being usually severer after solid than liquid aliments. In a

few cases the pain is lessened by the ingestion of a moderate quantity of food, a result which seems to be due to the neutralization of the acidity of the gastric juice. Mansell Moullin claims that pain is due to irritation of an inflammatory nature affecting the sensory nerves in the peritoneum and induced by the movements of the stomach. The following table from Anders will assist in differentiating ulcer of the stomach from gastralgia.

Gastric Ulcer.	Gastralgia.
1. History of certain occupations:—Anemia, Chlorosis, Amenorrhea, Tuberculosis, and diseases of the heart.	1. History of Neurasthenia, Neuralgia and Hysteria common.
2. Most frequent from fifteen to thirty-five years of age.	2. Most frequent before or near the menopause (in the female).
3. The paroxysms of pain usually come on at a definite period after eating.	3. Paroxysms more frequent when the stomach is empty than soon after meals.
4. Eating rarely relieves the pain.	4. Eating usually brings relief.
5. Tenderness on pressure over a certain limited area in the epigastrium.	5. Tender spot absent. General hyperesthesia of the skin often present.
6. Pressure usually aggravates, and only occasionally relieves patients during paroxysm of pain, not during the intervals between seizures.	6. Pressure almost always relieves the pain.
7. In the intervals between the attacks gastric disturbances, more or less severe, are present; also tender point frequently.	7. In the intervals between attacks no gastric disturbances present, as a rule.
8. Hematemesis present in nearly one-half of the cases.	8. Hematemesis absent.
9. General health often much impaired, particularly late in the affection.	9. General health less affected than in ulcer.
10. Physical signs of mass may be present.	10. Signs of tumor always absent.
11. Dilatation may co-exist in the late stages.	11. Dilatation never present.
12. Hyperacidity of gastric juice usually present.	12. Hyperacidity present only in serious cases of gastralgia with gastric catarrh.
13. Improvement follows rest and regulation of diet.	13. Regulation of diet has no effect.

3. *Vomiting.*—"Vomiting, next to pain, is the most frequent symptom," says Anders. If it contains blood it is of importance as a symptom of the disease. The blood may be so altered by the gastric juice as to appear as the characteristic

coffee-ground vomit. Usually the vomiting occurs shortly after taking food up to a period of two or three hours afterwards, and usually brings relief. The vomited matter almost always contains an excess of hydrochloric acid. It is not uncommon for the vomiting to occur at the height of the paroxysm of pain. The vomiting is caused by the irritability of the stomach, stenosis of the pylorus, or hour-glass contraction. Sometimes the vomiting occurs apart from the taking of food, and may come on in the night or early morning. In such cases the vomitus is usually composed of pure gastric juice, highly acid. The persistent vomiting may cause marked emaciation.

4. *Gastric Cancer and Ulcer.*—It is sometimes difficult to distinguish cases of carcinoma of the stomach from those of ulcer. Prof. W. H. Welch gives the following table as an aid in the diagnosis of these two conditions:

Gastric Cancer.	Gastric Ulcer.
1. Tumor present in three-fourths of the cases.	1. Tumor rare but may be present.
2. Rare under forty years.	2. May occur at any age; over one-half the cases under forty years.
3. Average duration about one year; rarely over two years.	3. Duration indefinite; may be for several years.
4. Gastric Hemorrhage frequent but rarely profuse; most common in the cachectic state.	4. Gastric hemorrhage less frequent than in cancer, but oftener profuse; not uncommon when the general health has got a little improved.
5. Vomiting often has the peculiarities of that of dilatation of the stomach.	5. Vomiting rarely referable to dilatation of the stomach, and then only in a late stage of the disease.
6. Free hydrochloric acid usually absent; lactic acid present.	6. Free hydrochloric acid usually present in excess.
7. Cancer fragments in washings or in vomitus.	7. Absent.
8. Secondary tumors in liver, peritoneum and lymphatic glands.	8. Absent.
9. Rapidly advancing loss of strength and flesh with developing cachexia.	9. Cachectic appearance usually less marked and of later occurrence than in cancer.
10. Epigastric pain more continuous; less dependent upon taking food, less relieved by vomiting, and less localized than in ulcer.	10. Pain is often paroxysmal; more influenced by taking food, oftener relieved by vomiting, and more sharply localized than in cancer.
11. No improvement or only temporary in course of the disease.	11. Sometimes a history of several attacks; usually a marked improvement by regulation of diet.

5. *Physical Signs.*—These are few and not very definite in character. Tenderness is generally found on palpation, though it may be absent. In some cases the spot where the pain is felt is excessively tender to pressure, which is a valuable diagnostic sign. In some chronic cases a thickening of the tissues may be felt, especially towards the pylorus. When these indurations become adherent to adjacent organs, the condition may resemble very closely carcinoma of the parts.

6. *Perforation.*—This occurs in from 6 to 7 per cent. of all cases of gastric ulcer, and one author in Wood's Reference Hand-book gives 15 per cent. It is, therefore, of much importance to recognize the condition at once, as it is necessarily a surgical complication and requires immediate attention, the results of operative treatment in these cases being much better when resorted to early after the rupture.

Moynihan divides cases of perforation into the acute, in which the stomach walls give way suddenly, and there is a free escape of its contents into the peritoneal cavity; the subacute, where, for some reason, the escape of the stomach contents is more gradual and the symptoms less urgent, due to a very small opening, an empty stomach at the time, or some omentum closing the opening; and the chronic, in which the ulcer has slowly eaten its way through, and a protective peritonitis has formed, with adhesions to surrounding organs or parts, causing a localization of the escaping gastric contents and the formation of abscesses.

The symptoms and signs of perforation are usually sudden. The patients are taken with sudden collapse, though in some instances they can make some exertion. Perforation generally follows some physical effort, vomiting, an injury, or a hearty meal. The onset of the pain is sudden, and is referred to the epigastrium, but it soon spreads. Soon there is difficulty in breathing, and a deep inspiration may become impossible. As the graver symptoms develop, the face becomes anxious and pinched, and there is usually great restlessness. There is usually accelerated pulse. At first there may be no fever. The abdomen may be flat and tense, or distended, and the muscles are rigid. Tenderness is mostly confined to epigastrium. There may or may not be dulness in this region, and the liver dulness may not be obliterated. A gurgling sound of the escaping liquids may be heard. Vomiting may occur after perforation has taken place. The pain is continuous.

In the Practitioner's Guide, by Carr, Pick, Doran and Duncan, the symptoms of the acute cases are given as " sudden

onset of abdominal pain, extreme collapse and sometimes vomiting, the abdomen becoming distended and the breathing thoracic." In the cases of chronic perforation, the same work states that the adhesions localize the symptoms to the upper part of the abdomen, and an abscess may result in the liver, spleen, pancreas, under the diaphragm, or extend into the lungs or pleuræ. Should the adhesions break down, a general peritonitis follows.

7. *Hour-Glass Contraction.*—This condition is far more common than was formerly thought to be the case. It may be recognized by the following symptoms:

(1) If the stomach tube is used and the stomach washed out, a certain amount of the fluid may be lost, having gone into the second cavity.

(2) If the stomach be washed out till the fluid returns clear, there may be a sudden escape of foul fluid from the lower cavity.

(3) If the stomach be palpated and a splash obtained, the use of the tube to empty the first pouch does not remove the splashing sound, owing to the fluid that remains in the lower pouch.

(4) By giving a portion of a seidlitz powder the first pouch can be seen to distend, and in a short time the distention passes on into the second cavity.

(5) The sulcus due to the constricting band has been sometimes made out.

(6) Auscultation of the stomach will generally detect the sound of gases and liquids passing from one cavity to the other.

VI. The Mortality.

Wood's Reference Hand-book gives the mortality for men at 22, for women at 6, and for both at 8½ per cent. Anders gives the death-rate in all cases as about 20 per cent.; Bulstrode gives a mortality of 18 per cent.; Welch's cases gave 15 per cent.; Heydenreich's, 25, and Fenwick's 20 per cent. From a large number of cases, Max Einhorn thinks there is only 50 per cent. of permanent cures under medical treatment. G. G. Sears gives 21 per cent. of failures. Greenough found that out of 187 cases, only 40 per cent. remained well after a period of five years. These percentages must be increased by those cases which have died of perforation, melena, or chronic ill-health due to gastric ulcers, and in which a diagnosis was never made. It may safely be said that the mortality does not fall under 20 per cent. of all cases. This shall be shown to be of importance

when the surgical treatment is considered. Add to the foregoing mortality the chronic suffering, the repeated relapses, the later ill-health, and the possibility of cancer, and it will be seen at a glance that the treatment of gastric ulcer on purely medical lines leaves much to be desired.

VII. Treatment.

The treatment of gastric ulcer is now admitted to be both medical and surgical.

1. *Medical Treatment.*—The treatment of ulcers of the stomach in their early stages, and when there are no serious complications, should be medical. Cases in the young are more amenable to such treatment than are those in older men and women.

(*a*) The first essential in treatment is absolute rest in bed. The patient should not be allowed to go about the house, and, in most cases, should be enjoined to use the bed pan. Many cases suddenly relapse by not insisting upon a lengthy enough period in bed. This should be at least two or three weeks, but may require to be indefinitely extended.

(*b*) The second essential in the management of gastric ulcer is the proper feeding of the patient. In some cases the stomach is so extremely irritable that it will not bear any food, or even the blandest of liquids. In such cases the feeding must be carried on wholly by the bowels. A word of warning must be raised against the custom of allowing the patient too much water or to be given ice to suck. This does not permit the stomach to obtain sufficient rest, and frequently induces vomiting. There are cases, however, where the rectum is so unmanageable that it cannot be depended upon entirely. By care, however, much may be done to train it to retain nutrient enemata. The lower bowel should be washed out with a quart of warm water prior to the administration of the nutrient liquid. These injections should contain about four ounces and be composed of peptonized milk, or thin gruel, to which may be added the yoke of an egg. Peptonized beef-tea or meat extracts are also useful. To these injections may be added occasionally a few drops of liquor opii to lessen the sensitiveness of the rectum. These enemata should not be given too frequently; and sometimes a small quantity of alcoholic stimulant may be added to them.

Any nourishment by the mouth should be at first of the blandest character, such as milk diluted with water or lime water. Raw egg mixture, beef-tea, raw beef juice, or some of

the meat extracts may be tried. Some of the lightest of the invalid or infant foods may also be employed. These various nutrients may be peptonized. Leube's meat extract, milk gruel and buttermilk may suit some cases. In the feeding by the mouth it is of importance not to allow the patient too much at a time, and to make up in quantity by ordering some liquid nourishment often. In cases of extreme irritability of the stomach it may be very helpful to wash out the stomach with a weak soda solution. If a soft tube is carefully employed no harm will come from its use. The utmost care must be taken when the patient is again permitted solid food, and such articles as contain coarse and irritating particles, such as small fruits, must be avoided.

The least amount possible of chloride of sodium should be allowed the patient, as the hydrochloric acid of the gastric juice requires chlorine for its formation. This is important.

(*c*) The medicinal treatment is of much importance. The bowels should be kept open by means of some mild saline, and one of the best is Carlsbad salts, or its artificial substitute, sulphate of sodium, 50; bicarbonate of sodium, 6; chloride of sodium, 3. Many writers attach considerable value to the exhibition of bismuth carbonate, which may be given in doses of 20 to 30 grains every four hours. Fleiner gives 2 to 3 drachms in water in the morning. Nitrate of silver has long held an important place in the therapeutics of this disease. It is of undoubted value in some cases. Carbonate of magnesium and sodium are also useful alkalies for the correction of the hyperacidity of the stomach. Opium or morphine may be required for the relief of the pain, and the latter may have to be injected under the skin. Small doses of the extract of belladonna may be used. The hypodermic administration of digitalin, gr. 1-30, and strychnia, gr. 1-30, may be called for should the pulse become very weak. To correct the acidity of the gastric contents and prevent auto-digestion of the stomach, Hemmeter recommends magnesiæ ustæ, sodii carbonatis and potassii carbonatis, each, grams 5, and sacchar. lactis, grains 25. Of this mixture half a teaspoonful is placed dry upon the tongue every three hours.

(*d*) Hemorrhage demands prompt and careful attention. A number of remedies have been proposed for this complication of gastric ulcer, but none of them can be relied upon. Tannic acid in 15 grain doses every fifteen minutes until three or four doses have been administered, is highly recommended by some. Others have spoken well of alum, of which a tea-

spoonful may be dissolved in a glass of warm water, the patient drinking the solution gradually. Drinking half a pint of a 2 per cent. solution of gelatin has recently met with much favor. One of the most recent claimants for attention is adrenalin, which may be given in 5 minim doses of 1-1,000 solution, and repeated as required. Hemmeter speaks highly of the hypodermic use of ergotol in 20 to 30 minim doses, while others advice in the same way 2 or 3 grains of ergotin. If there be pain with the hematemesis, morphia gr. ¼ should be given subcutaneously. In addition to relieving the pain, it is an adjuvant to the other means employed. The application of an ice bag over the stomach has found advocates, while others have spoken as strongly of hot fomentations. Tripier has advised copious hot water injections into the bowel. It may be necessary to resort to intravenous or intra-tissue injections of normal saline. Many years ago I recommended the application of elastic bands, or a firmly applied bandage, high up the extremities, as a means of withdrawing blood from the viscera, and I have still great confidence in the practice in all forms of internal hemorrhage. During the period of vomiting the patient must be kept absolutely quiet, not being allowed to sit up in bed, and being compelled to use the bed pan and urinal. No food, or liquids should be allowed by the mouth, and the least amount possible by the rectum in order that the blood pressure may be kept low.

2. *The Surgical Treatment.*—The treatment of gastric ulcer has acquired an added interest of late years, owing to the prominent part taken in it by the surgeon. That he has saved many lives that would have been lost, and relieved many sufferers who could not have been improved without his aid, there is no doubt. While this is true, it is still too soon to determine how lasting some of these cures may be, as we know that an ulcer may remain healed for a long time and then open up again, or a new one form. In like manner, after the patient has left the hands of the surgeon, however much benefited, the same conditions may reappear. The conditions for which the surgeon may be called upon to perform an emergency operation are uncontrollable hemorrhage and perforation. The conditions for which he may operate at some selected or convenient time are chronic ulcers, pyloric stenosis, and hour-glass contraction. In these three latter conditions surgery has accomplished much, and, with added experience, is destined to achieve a brilliant future. But these operations belong rather to the field of gastro-plastic surgery, and will not be discussed

at present. The two operations upon which I shall offer a few remarks are those for hemorrhage and perforation.

(*a*) *Hemorrhage.*—Mr. Moynihan states that "the one character that the hemorrhage should possess to warrant the performance of an operation is recurrence; recurrence, too, at intervals, which, becoming gradually curtailed, do not allow the patient to make up in the interval the ground which he loses in the attack." He has operated upon 22 cases, which from appearances and the nature of the hemorrhages would most likely have terminated fatally, and with 19 recoveries and only 3 deaths.

Joseph A. Blake states "that a single large hemorrhage, without previous symptoms referable to ulcer, should not be operated upon, but when there have been antecedent symptoms operation should be performed. Cases suffering from a recurrent hemorrhage should be operated upon." With this opinion, Dr. W. Gilman Thompson concurs in his article.

Recently, Mr. Frederick Eve reports two cases of duodenal ulcer, with severe hemorrhages, treated by the operation gastro-enterostomy, both patients making good recoveries.

Dr. Edward M. Buckingham reports a case of successful operation for hematemesis. About sixteen years ago Dr. Atherton, then in Toronto, successfully operated for gastric hemorrhage.

Other cases could be collected to show that this complication in its most desperate and uncontrollable form may be made the subject for successful surgical intervention.

(*b*) *Perforation.*—On this subject there are now many cases on record. At the recent meeting of the Canadian Medical Association, Mr. Caird gave details of 18 cases operated on for perforation, with 7 deaths, and one of these was quite hopeless before operation.

Alfred A. Young records three cases of operation for perforation, with two recoveries, and one death, following a secondary operation for subphrenic abscess.

T. J. Wood mentions a case he operated on 52 hours after the perforation had occurred, in which recovery took place.

F. B. Lund records three cases of perforation with operation and recovery. In one case there was some suppuration in the abdominal wall, and in another a rather slow convalescence.

B. G. A. Moynihan, in a recent paper, relates 22 cases of perforated ulcer operated upon, and with 14 recoveries and 8 deaths.

These cases could be multiplied by a search through the literature of the subject. Enough has been said to prove the aid of the surgeon should be sought in all cases of suspected perforation.

(*c*) *General Results of Surgical Treatment.*—Heydenreich states that the death-rate in gastric ulcer does not fall much below 25 per cent.; and that in the cases of the disease surgically treated, which he has been able to collect it fell to 16 per cent.

In the Hunterian Lectures, five years ago, Robson and Moynihan collected 184 cases of operation on gastric ulcer, excluding those for hemorrhage and perforation, with a death-rate of 16 per cent. In their recent work upon the subject, they state that the death-rate should not exceed 5 per cent. in cases operated on for gastric ulcer, excepting the emergency cases of bleeding and perforation. They go on to say: "In those treated surgically in the worst and most complicated cases, the results are so striking that it is incumbent to urge most strongly that, although cases of gastric ulcer should first be submitted to medical treatment, yet if such treatment fails to cure in a reasonable time, or if relapses occur on the resumption of solid food, then medical should give place to surgical treatment."

It would appear that the death-rate in operations for hemorrhage of the stomach may be placed at about 15 per cent., for operations in cases of perforation at about 40 per cent., and operations when the time is favorable, about 5 per cent. It is certainly reasonable to expect, as it becomes more generally the custom to operate early in perforation cases, the results will be much better.

In conclusion the medical treatment may be summed up in the words of Boardman Reed thus: (1) Quiet the pain; (2) allay vomiting; (3) prevent dilatation of the stomach; (4) preclude or arrest hematemesis, and (5) prevent perforation.

The claims for surgical treatment are thus set forth by Robson and Moynihan: "For intractable or relapsing gastric ulcer it is, in the greater number of cases, the only satisfactory method of dealing with these refractory cases, and operation should be resorted to at a much earlier period than has hitherto been the custom, and always before the patient is so far reduced by pain and starvation, or the supervention of serious complications that weakness and anemia render any operative procedure hazardous."

Mikulicz says: "The danger to life from gastric ulcer is at least not less, but far greater, than the danger of a complete modern operation."

ANTE AND POST-PARTAL EXAMINATIONS.*

By FREDERICK FENTON,
Associate in Obstetrics, University of Toronto.

Mr. Chairman and Gentlemen,—A few months ago I read a short paper touching upon some of the points contained herein, but I believe the subject is sufficiently important to warrant a further reference to the matter, and trust that those of you before whom the question was discussed on a previous occasion will bear with me, if I find it necessary to repeat some things which were said at that time.

Ante-partal Examinations.

Under this heading I include: (*a*) General examination of mother. (*b*) Urinary examinations. (*c*) Special abdominal examination, including pelvimetry. (*d*) Vaginal examinations.

General Examinations.—The history of the patient will, of course, have a great deal to do with the extent of our general examination, but a careful examination should always be made of her heart at a period sufficiently long before the probable date of confinement to allow of the timely adoption of measures for her safety in case a cardiac lesion should be found.

The examination of the lungs at the same time can easily be carried out, and should always be done where there is anything in the history or appearance of the woman to suggest the probability of pulmonary trouble.

The routine investigation of the condition of the heart and lungs, not only at times gives most valuable information where least expected, but serves very frequently "to break the ice," with timid and bashful primiparæ, and make other examinations less embarrassing and consequently more thorough.

Urinary Examinations.—It is scarcely necessary for one to refer to the routine examination of the urine during pregnancy. These examinations should begin at the fifth month, and be continued at intervals till the pregnancy is terminated.

While it is true that there is a transient albuminuria in from 5 to 10 per cent. of pregnant women, and that eclampsia may occur without albuminuria, these may, I think, be regarded as the exceptions which prove the rule, that evidences of nephritis are found in the urine of women preceding an eclamptic seizure.

* Read before the Ontario Medical Association, June, 1905.

Abdominal Examinations and Pelvimetry.—By our examination and measurement of the pelvis we endeavor to, and, to a degree which is of value, do, secure useful information regarding the size and shape of the pelvis; by our abdominal examination we can diagnose the position and presentation of the fetus and form some idea as to the size of its head. One must not interpret the findings by external pelvimetry too literally, but in a general way. The internal measurements of the pelvis do not bear a constant relation to the external, many things entering into the question which one cannot calculate absolutely. But in spite of this, one can get useful information by this method of examination and its routine use is advisable.

Pelves may readily be divided into two great classes, viz., those which are certainly of a sufficient size for an average child to pass through, and those which may not be.

Having placed a case in class No. 1 we have no more anxiety on that score, while if it is assigned to class No. 2 we should make an internal examination of the pelvis, and settle the question definitely.

It would be superfluous for me to describe the method of making abdominal examinations, since many here are familiar with the procedure, while those who have not been in the habit of making them can find full descriptions in any recent textbook on the subject.

A point which has been frequently raised in connection with the diagnosing of position and presentation by external examination about the beginning of the ninth month, at which time I would advocate it, is the fact that not infrequently the position will have changed before labor commences, and that, therefore, the information one has obtained is unreliable. That is not of much consequence, since the changes in the position of the fetus, which occur in the last two or three weeks, are usually from what one might term abnormal, to normal positions. Thus an occipito-posterior may change to an anterior, or a breech to a vertex, but seldom the reverse. Having examined, at the end of the eighth month, and found a vertex presentation in an anterior position, one can almost bank on it that the same condition will be found at labor; if, on the other hand, there be not a vertex presentation, or if the position is posterior instead of anterior, such may be found to have changed before or in the early part of labor. The knowledge that two or three weeks before there was an abnormal position or presentation, will put one on his guard, and he will be care-

ful either to corroborate his previous diagnosis or ascertain by sure and certain signs what change in the position of the child has occurred in the interim. But not only can one diagnose the position and presentation of the child with greater ease and certainty, and less disturbance of his patient by external than by vaginal examination, but information as to the condition of abdominal wall, tumors, multiple pregnancy, dead child, etc., may be gathered which cannot be learned per vaginam at all, or only so late as to be of little service.

Vaginal Examinations.—Having made the diagnosis of position and presentation early in the ninth month and verified it, if possible, by the same method on first seeing the patient in labor, I make a vaginal examination, mainly for the purpose of ascertaining the condition of the cervix.

While one can distinguish between a vertex and non-vertex presentation per vaginam without difficulty, as a rule, I must confess that I do not care to trust too much to the tip of my finger for the recognition of the position of the head. Early in labor the presenting part is too high for satisfactory examination, while late in labor the caput tends to obscure things. When it is necessary to make a careful diagnosis per vaginam, I prefer to anesthetize the patient and pass as much of my hand into the vagina as is necessary to allow me to feel some feature sufficiently distinctive to settle the matter beyond all doubt.

By making a diagnosis before labor has set in, which, in the vast majority of instances will be correct, one can reduce the number of vaginal examinations to a minimum, greatly to the comfort and safety of our patients.

Post-partal Examinations.

These will, of course, include the ordinary examination of temperature, pulse, etc., which give us valuable information as to the general condition of the patient, but no special information as to the progress of involution.

Examinations for the purpose of determining the size of the uterus on successive days of the puerperium, was first done by Charpentier, of Paris (1880), who first attempted to do so by the daily use of the sound, but shortly abandoned that method for the pelvimeter, which he used by introducing one arm into the vagina, holding it against the cervix, while an assistant placed the other end on the fundus. Such procedures were too difficult and dangerous to secure adoption, and consequently died an early death.

It was not for another fifteen years (1895) that anything further appears to have been written on this subject, when Dr. T. B. Stevens and W. S. A. Griffith reported before the Obstetrical Society of London the results of their investigations.

Their measures were external entirely, that part of the uterus lying above the symphysis being measured both vertically and transversely, the former being the more important and reliable. The instrument used for the taking of the measures was an ordinary two-foot rule.

In the following year McCann (*Brit. Med. Jour.,* 1896), recorded the results of observations made by him on the progress of involution. He used an ordinary tape-line and measured from the symphysis to the top of the fundus in the middle line.

These gentlemen recorded their observations on an ordinary temperature chart, the 100 deg. line being taken as the top of the symphysis, each degree above representing one inch.

This method of regularly measuring the height of the fundus above the top of the symphysis, and the charting of the same, was introduced into the Toronto General Hospital in the year 1901 by Dr. Adam Wright, and some of the material for this paper has been obtained from the records there, the balance being from private cases.

In the making of these measurements certain rules must be followed, otherwise one is apt to get results which may be misleading:

1. The measurements should be made daily and preferably as near as possible at the same hour each day.

2. The patient must have passed water within a very short time before measuring, and the obstetrician should satisfy himself that the bladder has been emptied, especially in the first two or three days of the puerperium.

3. If the bowels have not moved within twenty-four hours care must be taken that the rectum is not overloaded. Neglect of these last two precautions is probably the most frequent source of error.

4. The uterus should be gently massaged for a few minutes before measuring, so that one may always measure it in the same condition, and not in a state of contraction one day and that of relaxation the next.

Having excluded these sources of error one will find the fundus from five to six inches above the top of the symphysis pubis on the day after labor, and, if all be well, below the symphysis, in the vast majority of cases, by the end of ten

days or two weeks. The rate and regularity of the fall may be influenced by certain things, some of which may be looked upon as pathological, and others as physiological. The progress of involution may be delayed by: 1. Multiparity. 2. Advanced years. 3. Lactation. 4. Prematurity of labor. 5. Prolonged labor. 6. Retention of secundines or blood clot. 7. Septic infection of the endometrium. 8. Lacerations of the cervix. 9. Grave disturbances of health from any cause.

The curve in a primipara is normally about half an inch lower than in a multipara. The descent of the fundus is rapid for the first few days, after which it becomes more and more gradual.

Failure of the fundus to fall on the day following confinement is very frequently found to be due to distended bladder, but if such occurs on subsequent days and continues for three or four days it will usually prove to be due to one of three of the causes of delayed involution referred to above, viz., retention of secundines or blood clot, septic infection of the endometrium, or laceration of the cervix.

The older the woman and the larger the number of children she has had, as a rule, the slower will be the fall of the fundus. Lactation has been found to impede rather than accelerate the progress of involution. Grave disturbances of health from intercurrent disease not necessarily connected with the pregnancy, will, of course, affect the removal of the excess of uterine tissue, just as it would influence other vital processes.

Failure of the fundus to descend for three or four days, or its sudden or gradual rise to a higher level than it had been, should lead one to make an investigation as to the cause, especially so if pulse rate or temperature be elevated. With elevated pulse and temperature it will probably be found to be septic in nature, and the sepsis will have extended to, or originated in, the endometrium.

Involution will not necessarily be interfered with, because there is sepsis, but only if the sepsis involves the uterus itself, causing local irritation or inflammation, with the accompanying swelling and engorgement.

Cessation of involution for a few days, with normal pulse rate and temperature, will, in a large percentage of the cases, be found to be due to laceration of the cervix.

One sees a chart every now and then, which apparently will not go according to rule, but just in this connection I may say that I have come to look with some suspicion upon measurements taken by any one not familiar with the anatomy of the

pelvis and abdomen. Too much should not be left to a nurse. They frequently produce the most extraordinary involution lines, which are quite incorrect. The following working rules have been drawn from a goodly number of carefully kept charts, upon which I base my remarks:

1. Where the fundus is falling there is no necessity or justification for the exploration of the uterine cavity. If sepsis exists it must be looked for elsewhere.

2. If involution has not progressed for three or four days a careful examination should be made of the genital tract.

3. Sub-involution, associated with other evidences of sepsis, indicates that the uterus is at least a point of infection, if not the only one, and as such requires our immediate attention. Remove all foreign substances and disinfect the endometrium, but do so with all gentleness. We should not forget that nature has ways of her own of preventing the entrance of infection to the blood and lymph streams, and should hesitate to break down (curette) her barriers until we have something better to substitute for them.

4. Sub-involution, with no suggestion of sepsis, is most frequently due to one of two causes, viz., retention of secundines or clot, or laceration of the cervix.

In the first case it is only necessary to remove the foreign substance. The treatment of cervical tears at this time is still a moot point, but, for my own part, I may say that the results of repair at the end of the first week have been most gratifying.

Not infrequently when exploring, according to the above rule, nothing has been found other than what appeared to be an unusual amount of lochia, frequently mucous in character, on disturbing the cervix, with the result, however, that the desired effect was secured. Apparently there was some obstruction to drainage, and the act of examination disturbed things sufficiently to remove the obstruction.

DIABETES.

By DR. ARNOLD LORAND, Carlsbad, Austria.

Diabetes appears generally in people who are fond of rich food, especially of much meat and carbohydrate. Under such conditions it will develop the sooner in people whose work causes a strain upon their nervous system, such as lawyers, physicians and diplomats. It is interesting to note that diabetes develops spontaneously in dogs only when they are fed with albuminous and sweet food, and more readily if the animal be of a nervous temperament, like a fox terrier. This kind of food in large quantities may exercise, after a certain time, a deleterious action upon those glands which control metabolism, like the thyroid and the pancreas. By experiments which he has made in company with Prof. Minkowski, Dr. Lorand has found that in dogs, whose pancreas has been extirpated, the thyroid shows histological alterations, indicating a condition of hyperactivity, like that found in Graves' disease, or by Chalmers Watson in fowls, which have been fed exclusively on raw meat. Before Chalmers Watson, Dr. Lorand found by clinical observations that abundant meat food exercises a deleterious action upon the thyroid. On the other hand, it has been found by Toboleff that rich carbohydrate food induces a degeneration of the islands of Langerhans in the pancreas, to which, according to the vast majority of authors, is attributed an important role in the development of diabetes. According to the researches of Dr. Lorand, diabetes is due to two main causes, viz., degeneration of the pancreas; second, hyperactivity of the thyroid. Diabetes after mental emotion is due to subsequent alterations of the thyroid, which may go so far that even Graves' disease might come on suddenly after such a cause. It is a fact that glycosuria, or diabetes, is very frequent after all conditions of hyperactivity of the thyroid gland, whereas in the opposite condition, myxedema, it is impossible to produce even alimentary glycosuria after the largest doses of glucose. All diabetic dogs have entirely lost their sugar after extirpation of the pancreas.

It is an important factor to detect diabetes in its beginning. Many diabetics show no subjective symptoms whatever of their disease, not even thirst. The urine of each patient should be examined, no matter what is his ailment. It is neces-

* Résumé of an address delivered at a meeting of the Toronto Medical Society.

sary to give a test dinner in case no sugar is found, taking into consideration that many light cases of diabetes do not eliminate any sugar even for months. By giving a test dinner of ⅔ ounces of grape sugar two hours after breakfast, the life insurance companies could be protected from severe losses. Diabetes treated from the beginning is very promising. The main object is to prevent the appearance of diacetic acid, as it is this substance, with following acid intoxication, that ends the life of diabetics. To prevent it no severe diet should be given, as exclusive diet of meat and fat surely might bring it about after a certain time. Meat should be limited in every case, especially in severe cases. The diet should be mixed, little meat, green vegetables, a few eggs, cream, and, in severe cases, much milk and no meat. Apples, peaches and oranges, in certain quantities, are much recommended. Bread, graham-bread, should always be given. In severe diabetes much alkali should be given, especially by the rectum, so as not to injure the stomach. Carlsbad waters might give good results, especially in cases without cachexia. In severe cases, although the symptoms will get better, the sugar may sometimes persist and also diacetic acid. Drugs are of no use for a long continued treatment, but antithyroidin may influence beneficially, especially the nervous symptoms.

ODE TO THE SURGEON.

By PRICE-BROWN.

The surgeon to-day is a warrior bold,
Prepared for grim conflicts as of old;
But with desperate armies far and near
Of numerous forms of bacterîa;
So with rigid face and keen eye set,
He bids all forms of cocci: "Get."

Staphylococcus aureus,
Streptococcus, too,
Bacillus tuberculosis,
The pneumococcus crew;
Klebs-Loeffler and Von Hoffman,
Freidlander's pneumococ.
Tetragonus Neumann,
Et al propter hoc.

For swearing by science he firmly has will'd,
That all kinds of cocci must surely be kill'd,
Hence on authority sagely given
Before his patient has been shriven
Of his severe and dread disorder,
The germs must die, and that by order.
Staphylococcus aureus, etc.

So the fight goes on at a terrible pace
With washing and scrubbing all over the place;
Till, in the operating chamber,
Over the walls of which they clamber—
Douched in bichlor. and acid carbol.—
The cocci cannot even gambol.
Staphylococcus aureus, etc.

So millions within and myriads more,
Which swarm impressively round the door,
Determined to thwart the surgeon's will
And deftly baffle his keenest skill,
At once in horror give up the ghost,
A terrified and slaughtered host.
Staphylococcus aureus, etc.

Still the patient's body must be shaved,
A full foot round the part depraved,
And antisepsis by protargol,
Chloridum, green soap, acid carbol.,
With chloride compress overnight
To fit him roundly for the fight.
Staphylococcus aureus, etc.

The surgeon's hands are washed so clean,
That the outer skin can scarce be seen,
With green soap and antiseptics, too,
Scouring him righteously through and through,
So gown'd, capp'd, visored, gauntletted well,
He's ready to face even death's knell.
Staphylococcus aureus, etc.

But death can't steal as in days of the past,
Germ life being dead, death's vanquished at last;
For the wise surgeon, backed by the skill
Of the trained nurse, well tested by drill,
Does his work grandly, faith guiding his knife,
And with his keen blade, he saves the man's life.
Staphylococcus aureus, etc.

Yes, triumph in science brings triumph in art,
Men proudly fulfilling their thrice-honor'd part,
To aid the stricken, to knife foul disease,
To lengthen men's lives regardless of fees,
To stand as true surgeon, physician and friend—
Is as noble a life as heaven can send.

Staphylococcus aureus,
Streptococcus, too,
Bacillus tuberculosis,
The pneumococcus crew;
Klebs-Loeffler and Von Hoffman,
Freidlander's pneumococ.
Tetragonus Neumann,
Et al propter hoc.

Progress of Medical Science.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. McILWRAITH, FRED. FENTON AND HELEN MacMURCHY.

Phthisis and Pregnancy.

O. Burkhardt (*Deut. med. Woch.,* June 15th, 1905) gives the details of the histories of a number of cases, and reaches the following conclusions: (1) Pregnancy does not exercise, *eo ipso,* an unfavorable influence on the course of a tuberculosis of the lungs; cases do well at times in high altitudes. (2) Cases of progressive phthisis can become stationary during the course of a pregnancy, and the prognosis is then favorable. (3) Abortion does not benefit the lung condition; on the other hand it might do much harm. (4) Artificial abortion must, therefore, be limited as far as possible, and the indications which the author feels inclined to give for it are (*a*) the severest degree of phthisis, and (*b*) when hyperemesis gravidarum exists. (5) At the birth emotional excitement and bleeding must be reduced to the lowest measure possible (at times artificial delivery, care for satisfactory involution of the uterus, chloroform); suckling must be forbidden. (6) The treatment of the phthisis in high altitudes must be continued for from four to six months after the delivery, even in mild cases with favorable prognosis, in order to avoid late disturbances.—*Medical Age.*

The Treatment of Eclampsia.

John W. Byers (*Lancet,* September 9th, 1905) says that if the attack cannot be warded off the following is the proper procedure:

Treat the convulsions with morphine used subcutaneously. Keep the patient on her side, purge freely, use saline infusion, allow no liquids. In a word, as Gooch advised long ago, "take care of the convulsions and let the uterus take care of itself."

Make an effort to eliminate the poison by purgation, hot packs, and by saline infusion.

If labor has not set in treat the convulsions, but do not induce premature action of the uterus. If labor has begun and the patient is in the second stage and the os dilated, give chloroform and deliver by forceps if possible, or by turning. If, however, morphine and purgation with saline injections have been tried and the patient is not improving, dilate the cervix and deliver.

For the convulsions after delivery use morphine, purgatives and saline infusion.

In the prophylaxis of eclampsia rest, milk diet, warm baths, and purgatives are the best methods.—*N. Y. Med. Jour.*

Hyperemesis Gravidarum.

Dirmoser (*Zent. fur. Gyn.,* September 30th, 1905) describes observations made by him on twenty cases of vomiting of pregnancy, from which he advanced the theory of auto-intoxication. He has recently observed a case of eclampsia with pernicious vomiting. It occurred not at the end of pregnancy, but at the close of the third month, and there was only a small amount of albumin in the urine. He believes that there was a relation between the pernicious vomiting and the eclampsia. The poison produced by the hyperemesis caused the eclamptic seizure. Possibly this poison was acetone, which was found in considerable amount in the urine of this patient. The cause of the toxin production is believed to be not the fetus, but the increased amount of work falling upon the gastrointestinal tract. The growing fetus, through a reflex effect on the secretory function of the vagus nerve, influences the metabolism of the mother, and the intermediate products of the transformation of albumin are thrown into the circulation instead of being excreted by the kidney. This theory is supported by the finding of indoxyl, skatol, acetone and acetic acid in the urine and the increase of urobilin, peptone, etc. Eclampsia is due to an increase of ammonia compounds, the sign of a failing liver action. The liver, instead of transforming the products of albumin into such as are eliminated by the kidneys, throws them into the circulation. Among these are a number of ammonia compounds, leucin, glycocol, etc., which are regarded by Zangenmeister as a cause of eclampsia. Others believe the cause of the poisoning to be rather the lack of digestive power of the intestine than the failure of the liver.—*American Journal of Obstetrics.*

Treatment of Abortion in General Practice.

F. Moebius deals with the treatment of abortion in general practice, leaving theoretical discussion of the mechanism, etc., untouched. (*Therap. Monat.*, Sept., 1905.) While he holds that the most rational and physiological method of treatment is the expectant treatment, he considers that this is only safe for the patient if she is in hospital, and that such an expectant treatment as one would carry out must be fraught with danger

if the patient is not continuously watched by trained medical practitioners. The bleeding may come on quite suddenly and profusely, and before the doctor can be with his patient it may be too late. The question to decide is how best to empty the uterus completely and rapidly. This must be done with the least danger and with the greatest possible protection to the patient. All instrumental methods are to be avoided. This applies equally to the curette, the abortion forceps, and all other instruments. He then proceeds to describe the method which he believes to be the safest to follow. When the os and the cervix are patulous to the finger, he immediately clears out the uterus digitally. When two or more fingers can be passed into the organ, the procedure is easy. If only one finger can be passed, the operation may be found extremely difficult, and then it is better to plug, and two or three days later the whole ovum may be found just behind the plugging. As a rule, however, the difficulty does not lie so much in the detaching of the placenta as in the emptying of the detached portions from the uterus. This can be secured by washing the cavity well out by a powerful irrigation, care being taken to avoid bringing air into the uterus. The finger should not be removed from the uterus until everything has been detached from the wall of the organ. If this is impossible, much care must be taken to disinfect the finger again before reinserting it. As soon as the uterus has been emptied the organ contracts powerfully. This may be taken as a guide as to when all has been removed. If the water returns clear on irrigating one may be sure that the organ is empty. When the os is scarcely or not at all dilated, one should plug the cervical canal, and, if possible, the uterine cavity. Vaginal plugging has disadvantages. It may induce pains and the bleeding may soak through the packing. The only disadvantage of packing the uterus is the risk of sepsis, and this must be overcome by employing well-prepared iodoform gauze and care in the plugging. The necessary instruments are: Two vulsella, a medium-sized Sims' speculum, an irrigation tube, a long pair of plugging forceps (Dührssen's), and a catheter. The gauze should be kept in a special box, which can be held between the knees while one is plugging. For the cavity he uses gauze of 3 cm. (a little over 1 in.) in breadth, while for the cervix the breadth is 5 cm. (about 2 in.) The plugging may be left for forty-eight hours, and the temperature carefully watched. In conclusion, he speaks of the uses of dilators, which he does not recommend as a routine treatment.—*British Medical Journal.*

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN, M.B., M.D., C.M.

Paraffin in Deformities of the Nose.

It has now become so common to inject paraffin to remedy deformities of the nose, that some account of its occasional effects upon the eye will be of interest. Professor Uhthoff (*Berlin. Klin. Wochenschrift*—translated in the *Post-Graduate*) has an article on the subject in which he gives notes of two cases. In the first case, the "saddle nose" was of seven years' standing, supposed to have been caused by an injury. The paraffin was injected on three different occasions—the intervals being of five and eight months, and the melting point was low (of the paraffin), viz., 43 deg. C. During the third injection (the quantity is supposed to have been 1.3 g.) the patient suddenly noticed the left eye becoming blind. This she could instantly detect, as the physician had placed his hand over the right eye during the injection. There was no pain, but some lachrymation and several attacks of vertigo on her way home. According to her statement, on the day following the injection, the left eye became considerably turgescent, but an expert examination made on that day revealed no material inflammatory or turgescent manifestation. There was, however, at that time the ophthalmoscopic picture of embolism of the *arteria centralis retinae*, showing the characteristic opacities of the retina about the papilla, and in the region of the macula lutea with the reddish-brown spot in the fovea centralis. Eight days afterwards the fundus was examined again by a second ophthalmologist, who found the same condition. The eye was absolutely blind. The only treatment attempted was a puncture of the anterior chamber, with massage of the globe, but no benefit resulted.

A number of similar cases have been published, which Professor Uhthoff proceeds to discuss. He goes into many details, and comes to the conclusion that in the case above noted, the small particle of paraffin which produced the embolism must have passed through the pulmonary artery before entering the central artery of the retina. In using soft paraffin (melting point up to 45 deg. C.) a number of pulmonary embolisms have occurred, chiefly when the paraffin has been employed for gynecological purposes. Hard paraffin is much less likely to cause embolisms.

The injection of hard paraffin in non-fluid state by means of a screw-syringe seems to offer especial advantages, in that the

material is pressed through the canula in the shape of thin threads by means of a screw device and deposited at the desired spot, having previously been aspirated into the syringe in a fluid state.

Our author's second case was entirely different. In it the eyes were not damaged, but the paraffin passed into the lids, causing enormous swelling of the parts. The man, aged 57, was kicked in the face by a horse, with the resultant deformity of a saddle-nose. To correct this deformity, the attending physician made three paraffin injections in the latter part of 1904. The material probably was soft paraffin, but its melting point and the exact details of its administration could not be learned.

Until the end of February, 1905, the result was comparatively satisfactory, the bridge of the nose being filled up. About that time, on a rather warm day, patient had exerted himself with garden work, causing profuse perspiration. Then he felt a sudden itching and pressure in both eyes which he proceeded to rub in consequence. In the course of a few hours they became strongly swollen, and the surrounding portion of the face was involved in the inflammation.

The physician was at once called, who pronounced it a case of "erysipelas." Treatment, however, was unsuccessful, and the patient was quite unable to see, unless he, by his fingers, separated the lids to a slight extent. Ultimately a small portion of the skin of one lid was excised, when the microscope proved that the inflammatory proliferation was caused by the penetration of the paraffin into the eyelids. All other treatment being useless, pieces were cut out of the lids, by making large semi-circular cuts into the skin, parallel with the orbital margin, and passing as deeply as necessary. Healing took place without trouble, and the patient could ultimately open the lids to a slight extent and use his eyes.

Astigmatism a Cause of Vomiting in School Children. By Aaron Brav., M.D., *Philadelphia-New York Medical Journal* and *Philadelphia Medical Journal*, August 26, 1905.

The author speaks of the frequency of vomiting in children during their school term and of the obscurity of the primary cause. He cites three cases from his practice in which the vomiting was due to errors of refraction and concludes that vomiting is frequently caused in school children by astigmatic errors of refraction.

That astigmatism should be a cause of vomiting is by no means difficult to understand when we consider the dilemma in which the astigmatic patient finds himself. In all other errors of refraction, if the child fails in his effort to see distinctly he will give up the endeavor and place himself in a condition of rest. The astigmatic subject, on the other hand, can see almost all letters, but they are indistinct. A confusion arises due to the unequal refracted rays of light that enter the various unequal refractive meridians and often disturb the equilibrium of the child, which equilibrium depends much upon the normal condition of the eyes. Dizziness and vertigo result, followed by attacks of vomiting.

The vomiting due to astigmatism is always preceded by a sense of dizziness and occurs without any gastric pain. On inquiry the physician will always elicit the fact the little patient has considerable annoyance in preparing lessons, as the letters "jump" or run together. It may be laid down as a rule that vomiting in school children not preceded by a sensation of fulness, distress in epigastrium, epigastric pain, eructation of gases, regurgitation of fluid, heartburn, fever and chills is caused by astigmatic errors of refraction. The toxic form of vomiting which is occasionally met with in children and which closely resembles vomiting due to astigmatism is of uremic origin and is always accompanied or preceded by headache, dizziness and nausea, and is mostly independent of gastric pain.

Conservative Treatment of Severe Injuries to the Eye. By F. ALLPORT *(California State Journal of Medicine)*

Speaking, in the first place, of enucleation, he remarks that many eyes are taken out that, by patience and care, might have been saved. Such cases usually occur among workmen, and when a case of severe injury presents itself many surgeons take the easiest way and remove the injured eye. The author pleads for *conservative* treatment; wait and treat in all cases where there is a good chance.

Foreign bodies in the eye are spoken of in connection with the giant magnet. The author speaks highly of the use of this powerful means of treatment in proper hands, but deprecates its "unwise and unskilful use by surgeons who regard it as merely a powerful machine by which steel, etc., can be forcibly extracted from an eye without regard to method," and thinks such use increases the danger of sympathetic ophthalmia, as "through such use many eyes are spared" which should have been removed. He considers the chief use of the Haab magnet

to be when the foreign body is in the anterior chamber, but, if in the vitreous chamber, he prefers the scleral opening and small magnet.

The Importance of Slight Deafness in Children. By GORDON KING (*New Orleans Medical and Surgical Journal*, September, 1905).

The writer wishes to impress upon the general practitioner the fact that perfect hearing is one of the most important factors in the intellectual development of children, and that a moderate degree of deafness may be seriously harmful to its after-life. Taking the statistics of Reichert, Weill, Gelle and Bezold, he points out that at least 20 per cent. of school children have defective hearing, and this after eliminating severe forms, which are usually sent to special institutions. Slight degrees of deafness are often put down to inattention, and punished as such. The author thinks that in every school the children, as they join, should be carefully tested in order that such cases of slight deafness may be recognized and appropriately treated.

Editorials.

THE METRIC SYSTEM.

We are told that there is a strong probability that the Dominion Government will shortly, *i.e.*, within a year or two, make the metric system compulsory. The Toronto *Mail and Empire* states that the subject has in the past been regarded as an academic one, but in the near future it will become a practical one. It is expected that Professor Maclennan will shortly go to different parts of Canada with the object of educating public opinion.

The metric system originated in France in 1790, and has been adopted by forty-two other countries, *i.e.*, by all civilized and semi-civilized countries, excepting Great Britain, the United States and Russia. It was adopted by the U. S. Pharmacopeia of 1890, and is largely used in certain sections of the United States. It is generally conceded that the system, while simple and uniform, affords a facility of computation which renders it superior to all other systems of weights and measures.

Professor Maclennan gives the following reasons why the system should be adopted:

1. It is orderly, clear and logical.

2. There are no specific trade tables, such as avoirdupois, wine measure, grain measure, etc.

3. The single ratio of ten is involved, thus making calculations extremely simple.

From a purely medical standpoint one of the chief difficulties is that of writing prescriptions. In order to minimize such difficulties, as far as possible, it has become the custom in things medical to use only two metrical terms, the gramme (gm.) and the cubic centimetre (c.c.).

SECOND INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

Preparations are well on the way for this international event, which occurs once in three years, and it is expected that under the Presidency of Sir Lauder Brunton, and with the assistance of practically all influential persons who are interested in this truly national, as well as international movement, the Congress will be a great success.

A Local Committee has just been formed in Toronto, with the Hon. Dr. Pyne, Minister of Education, as Hon. President; Prof. Wm. Oldright, of the University of Toronto, as President, and Inspector James L. Hughes as Secretary.

It is the desire of the Local Committee to create an interest in the work of the Congress among all education authorities and others engaged in teaching, to diffuse information about the Congress among teachers, medical practitioners, architects, societies, municipal authorities, etc., and to interest manufacturers and builders in the exhibition of school appliances, equipment and construction to be held in connection with the Congress.

Further, the Toronto Local Committee has been requested to suggest subjects of first importance for general discussion, and to suggest names of those who would be likely to read papers, or in any way contribute to the proceedings of the Congress, and to promote the success of the Congress by obtaining the appointment of delegates, and inviting all who are interested to attend the meeting, which will be held in London, August 5th to 10th, 1907.

The membership fee is one guinea, and a number of the Local Committee, including the President and Secretary, have already signified their intention of being present at the London meeting, the Organizing Committee for which is already hard at work.

FEMALE MEDICAL STUDENTS AND THE UNIVERSITY OF TORONTO.

We are informed by the daily press of Toronto that there is a probability that the University of Toronto will open its doors to women students of medicine in the near future, and that the Ontario Woman's Medical College will cease to exist as such. The matter has been considered by the Medical Faculty, the Senate, and the University Commission. No formal report has as yet been given to the public, although the main features of the above statement are probably correct.

The Ontario Medical College for Women was organized about twenty-two years ago, chiefly by the efforts of the late Dr. Barrett, a teacher in Upper Canada College, and lecturer on Physiology in the Toronto School of Medicine. It is stated in the last annual calendar of the Medical College for Women that "The College was founded, and has been maintained, at great sacrifice upon the part of the subscribers and staff, in order to vindicate the principle that the sexes should not be taught medicine together." It is expected that under the new regime the principle of separate education will still largely prevail.

THE NICHOLAS SENN CLUB.

We believe that no city in the world has made more rapid advances in practical medicine and surgery during the last two decades than Chicago. We know at the same time that no surgeon of that city had done more to encourage the profession to push forward in the American strenuous way than Nicholas Senn, who is about as well and favorably known in Canada as in the United States.

We learn from *Surgery, Gynecology and Obstetrics,* that the profession of Chicago have formed a club with the above title in honor of Dr. Senn. It is stated that "The principal object of the club is to publish a 'Festschrift' in honor of Dr. Senn, but already many other plans have been proposed by which the club may advance the cause of scientific research, and also

promote good fellowship in a common cause. Under the skilful guidance of the President, Dr. Henrotin, the Nicholas Senn Club, with a single bound, has taken its place among the leading clubs of Chicago.

"The idea of the club, as well as the publication of the *Festschrift,* was a happy one. Dr. Senn's position in our profession is an unique one, and it requires only the magic of his name to carry such a movement to success. The emblem adopted by the club—a crossed pen and scalpel, with the words *'Nil sine labore'* inscribed beneath—is a most fitting one, and accurately represents the lifework of this distinguished surgeon and author, and the principle on which it has been founded."

The first annual dinner of the club was held on the evening of December 18th, and much enjoyed by those present. We are told that the organizers have decided not to confine the membership to the profession of Chicago, and that there is already a list of non-resident members.

THE REGULATION OF PROSTITUTION.

Almost from prehistoric times prostitution has been one of the blots of civilization, and every great empire has had at some period of its existence to face the problem of lessening the disease and death which followed in the train of the courtesan. Japan perhaps first suggested and adopted segregation of the prostitute—a system still in force in the land of the rising sun. The Romans also confined these women to certain parts of the city, chiefly in the cellars—(*fornix,* a vault, from which is derived our word *fornication*). In more recent times, European nations have suggested the regulation of prostitution, seeking, by means of medical inspection, to prevent venereal disease, while at the same time giving it governmental sanction, and placing it in the same category as the liquor trade. This method of dealing with the problem has been in force in France and Belgium for many years—long before the discovery of the gonococcus, and even before it was definitely

settled that syphilis was contagious in its secondary manifestations. In some cities of the United States the same plan has been tried, but for the most part found wanting. Yet as embryo legislators are constantly coming forward with a new scheme to regulate prostitution out of existence, including generally in their programme, medical examination, it is necessary for physicians to be acquainted with the statistics of the case.

The sum total of all the evidence accumulating for half a century points to the fact that a medical examination, even if performed every day by a competent and painstaking physician, affords no guarantee whatever against contagion. A skin lesion so small as to escape the examiner, may convey the virus of syphilis, while diagnoses made from vaginal and cervical swabs, are notoriously uncertain, so far as the gonococci are concerned.

Furthermore, wherever prostitution has come under govment control, the number of men visiting brothels has greatly increased, and, in spite of the utmost vigilance on the part of the inspecting physicians, some of the men have been infected. These persons certainly have a grievance against a government, which is, to some extent, responsible for their disease.

Statistics have been published, it is true, to prove that medical control is most successful, and the advocates of this method would have us believe that the reported cases of venereal infection arose from clandestine prostitutes, rather than from those in public houses. But the former are much the less likely to become diseased, because their clientele is limited, and because they are generally removed from "those veritable dens of debauchery, where liquor is employed as a matter of course to destroy men's will power and drive them to commit irreparable sins." There can be no doubt of course, that even the most superficial and perfunctory inspection will detect some infected females, who will be sequestered, but this good is more than counterbalanced by the increased number of men previously continent, who avail themselves of prostitution because they think all danger of contagion is removed.

As a matter of fact, medical control has been such a con-

spicuous failure wherever it has been tried, that the Society of Sanitary and Moral Prophylaxis, in dealing with the social evil, does not propose to discuss at its meetings any papers advocating regulation.

NOTES.

The medical staff of Grace Hospital, Toronto, are fitting up a fine pathological laboratory and an electrical room, which will be when completed, we believe, one of the finest on the continent.

The International Medical Congress at Lisbon in April is expected to attract a very large number of foremost medical minds. A large party will go from England by steamship, the vessel to be moored within easy distance of the meeting place of the Congress, and thus to remain as headquarters throughout the entire period of the excursion. All the discomforts of hotel overcrowding will be avoided in this way, and at the same time the expense be considerably reduced.—*Ex.*

Von Bergmann Made Senator for Life.

Kaiser Wilhelm has recently appointed von Bergmann member of the Upper House of Parliament (Herrenhaus) for life. This is the first time that such an honor has been conferred on a member of the medical profession.

New Medical Society Formed

The Essex County Medical Association was formed January 26th at Windsor, Ont. Dr. James Brien, Essex, was appointed Honorary President; Dr. Hughes, Leamington, President; Dr. Samson, Windsor, Vice-President, and Dr. McKenzie, Kingsville, Secretary-Treasurer. All the physicians in Essex County will be canvassed, and an endeavor will be made to unite the entire profession in that county.

Successor to Nothnagel at Vienna.

Nothnagel's vacant chair has been offered to Quincke, of Kiel, and to Strümpell, but each declined the honor. Von Noorden, of Frankfurt-on-the-Main, was then proposed by the Vienna faculty of medicine, and late advices state that von Noorden has accepted.

Rockefeller Institute Scholarships.

The Rockefeller Institute for Medical Research offers for 1906-7 scholarships to assist investigations in experimental pathology, bacteriology, medical zoology, physiology and pharmacology, and physiologic and pathologic chemistry, to be carried on in the laboratories of the institute in New York City. The value of these scholarships ranges from $600 to $1,000. They are open to men and women who are properly qualified to undertake research work in any of these subjects, and who will devote their entire time to it. Applications and credentials should be in the hands of the secretary of the Rockefeller Institute, Dr. L. Emmet Holt, 14 West Fifty-fifth Street, New York City, not later than April 1st, 1906. The announcement of the appointments is made about May 15th. The term of service begins preferably on October 1st, but, by special arrangement, may be begun at another time.

A very important announcement has come from Quebec. Dr. Page has been appointed Chief Medical Inspector in connection with immigration at the Port of Quebec. Those who have noticed with much alarm the numerous steamboat accidents which have occurred on the St. Lawrence in recent years will be pleased to learn that Dr. Page has also been named Government Oculist, and as such it will be his duty to examine the eyesight of the members of the Quebec Corporation of Pilots.

Personals.

Dr. Allen Baines, of Toronto, left for a month's trip to Jamaica, February 28th.

Dr. George McDonagh expects to return from Honolulu to Toronto, and resume practice about March 20th.

Dr. R. J. Wilson was elected Chairman of the Board of License Commissioners, Toronto, February 27th.

Dr. Crawford Scadding and his daughter "Toppie" sailed from New York for the Mediterranean, February 16th.

Dr. Opie Sisley (Vict. '88) spent December and January in New York, where he was engaged in post-graduate work.

Dr. Charles Murray, of Toronto, left for New York, January 20th, and sailed for the Mediterranean, February 24th.

Professor A. B. Macallum, of the University of Toronto, has been made a Fellow of the Royal Society of London, England, for services in research work.

Miss Sadie Gladstone, formerly head nurse at the "Pavilion," Toronto General Hospital, was married to Mr. Robert Strachan, of Fort William, February 20th.

Dr. M. H. Embree (Tor. '04), one of the interne staff of the Toronto General Hospital in 1905, has gone to Parry Sound, and is one of the acting surgeons in Dr. Stone's Hospital.

Dr. S. H. Westman (Tor. '96), who has spent the last two years in London, England, recently paid a brief visit to Toronto, and returned to England, sailing from Boston, February 20th.

Dr. W. B. Hendry (Tor. '04) went to Cuba in January. He expected to return to Toronto early in March and commence practice at 197 Carlton Street, the office and house formerly occupied by Dr. McFaul.

Dr. S. T. Rutherford, of Listowel, has sold his practice to Dr. Frederick Large, who took possession at the first of the year. Dr. and Mrs. Rutherford left on the 24th inst. for Naples, Italy, sailing *via* Boston on *SS. Canopic,* of the White Star Line. They will travel for about two months through Italy, Switzerland, France and the British Isles. The Doctor intends taking post-graduate work in London, Berlin and Vienna for six or eight months.

Obituary.

J. W. R. BOYER, M.D.

Dr. Boyer, of Barrie, died of typhoid fever, February 12th, aged 62. He was not engaged in active practice.

GEORGE PRINGLE, M.D.

Dr. Pringle, 632 Church Street, Toronto, died February 16th, aged 72. He graduated, M.D. (McGill) in 1855, and practiced for many years in Eastern Ontario. He removed to Toronto about fifteen years ago, but poor health prevented him from doing much work. He was much liked by the comparatively few who had the privilege of his acquaintance.

REGINALD FULTON.

Mr. Reginald Fulton, only son of the late John Fulton, M.D., died at 135 Beverley Street, Toronto, February 16th, after a brief illness from pneumonia, aged 34.

Book Reviews.

The Diseases of Infancy and Childhood. Designed for the use of Students and Practitioners of Medicine. By HENRY KOPLIK, M.D., Attending Physician to the Mount Sinai Hospital; formerly Attending Physician to the Good Samaritan Dispensary, New York; ex-President of the American Pediatric Society; member of the Association of American Physicians, and of the New York Academy of Medicine. Second Edition. Thoroughly revised and enlarged. Illustrated with 184 engravings and 33 plates in color and monochrome. New York and Philadelphia: Lea Bros. & Co. 1906.

Dr. Koplik's work in his own specialty is too well known in Canada to require any lengthy notice, and his book, when it first appeared, was most cordially received. This is the second edition, in which certain parts have been brought up to date, more especially the section on Infant Feeding. The illustrations and letter-press are not excelled by anything in pediatrics. The volume as a whole is most intensely practical, and meets all the requirements of a busy practitioner.

A Text-Book on Modern Materia Medica and Therapeutics. By A. A. STEVENS, A.M., M.D., Lecturer on Physical Diagnosis, University of Pennsylvania; Professor of Pathology, Woman's Medical College of Philadelphia. Fourth edition, revised. Octavo of 670 pages. Philadelphia and London: W. B. Saunders & Company. 1905. Cloth, $3.50 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The new 4th edition of Dr. Stevens' Materia Medica and Therapeutics has just been published, close upon the issuance of the Eighth Decennial Revision of the Pharmacopeia, to which it has been adapted. New articles appear on scopolamin, ethyl chloride, theocin, veronal and radium, together with new material on radiotherapy, and the changes in the names and strength of various drugs, as called for by the new Pharmacopeia, have also been made.

Of all the good works before us on this subject, this one can be said to be amongst the best.

Selections.

SURGICAL HINTS.

In most instances, so-called spasmodic stricture of the urethra is really a spasm of the external vesical sphincter due to irritation, commonly the result of prostatic disease.

An intractable eczema of the nipple may be the precursor of cancerous disease, and if it does not yield to treatment the necessity of excision of the affected area should be considered.

In old men suffering with hemorrhoids it must not be taken for granted that the existing symptoms are solely attributable to this affection, but it must be determined by thorough rectal examination whether there is not present an enlargement of the prostate, which of itself often gives rise to rectal disorder.

The application of strips of fly-blister or of cantharidal collodion around a joint which is the seat of gonorrheal arthritis sometimes marvellously relieves the pain and functional disturbances. Care must be taken, of course, not to apply the cantharides over bony surfaces to avoid ulceration. The Paquelin is also an excellent means for this purpose.

The injection of sterilized olive oil into the urethra will often facilitate the introduction of bougies through what at first sight appears to be an impassable stricture. In fact, as long as a patient can force urine, even if only drop by drop, through a strictural urethra, there is every likelihood that by delicate manipulation an instrument can be introduced.

In operations upon the nose and throat during the cold season of the year the possibility of pneumococcus infection must always be considered, since this organism is commonly found in the nose and the traumatism of the mucous membrane by the operation in connection with the lowered vitality of many of these patients favors its propagation and extension to the pulmonary tissues.—*International Journal of Surgery.*

Conclusions as Regards Uterine Curettage.

Practically 60 per cent. of uterine curettage is unsuccessful. Considerable curettage is damaging, some are even fatal. The damaging results of curettage are myometritis, salpingitis, peritonitis, cellulitis, sterility, perforation—in short, the distribution of infection. Uterine curettage has produced more damage than benefit. Curettage produces relief in about 25 per cent. only of atrophic and maldeveloped uterus. The damage inflicted by curettage on the other seventy-five per cent. overbalances the relief secured by the 25 per cent. The relief secured by curettage in subjects of anemia, neurosis, malnutrition is largely due to the preparatory and subsequent operative treatment, the anatomical and physiological rest, and the favorable mental impression on the patient. Some of the damaging effects of curettage must be credited to the usual accompanying uterine dilatation and some to the trauma of the traction forceps. There are no recognized standard rules for uterine curettage. There is no operation in gynecology that requires greater skill, knowledge of pathological conditions, or extensive experience than curettage.

Uterine curettage is indicated in an extremely limited number of subjects. The chief use of the sharp curette in gynecology should be for diagnostic purposes, and the mounted fragments of the endometrium present the most brilliant of microscopical views. The employment of the sharp curette on the endometrium is as irrational, harmful, and unnecessary as it would be on the nasal mucosa, for both nasal mucosa and endometrium possess no submucosa. Trauma and infection act similarly on both mucosæ. Does the specialist in nose and throat curette the nasal mucosæ? The apparent simplicity, security and innocence of uterine curettage have induced excessive use and abuse by general practitioners, amateurs and general surgeons without proper indications.

The abuse and misuse of the curette may be observed in: (*a*) Puerperal subjects (abortion, miscarriage, labor) distributing infection and emboli; (*b*) nondevelopment and atrophic uteri (inflicting wounds, atria for the distribution of infection); (*c*) in uterine myomata (hemorrhage and producing wounds for infection); (*d*) in sterility (inflicting wounds for the distribution of infection); (*e*) in endometritis (gonococcus, streptococcus, staphylococcus), producing wounds which exacerbate and distribute the existing infection; (*f*) in uterine perforation.

It should be remembered that in uterine curettage the chief

danger is not that the operator may introduce sepsis during the operation, but that the damage due to the wounds inflicted will give rise to atria of infection and the existing sepsis that he exacerbates. The employment of the sharp curette in the uterus has caused more suffering and death than any other gynecological instrument. The sharp curette is the most dangerous and cruel of gynecological instruments. It is cruel, because it inflicts untold suffering. It is dangerous, because it inflicts on the adjacent and genital visceral tracts acute and chronic disease with sterility and occasionally death. The object of the curette is to produce a new surface endometrium by destroying the surface of the old one. The method is too dangerous and too risky. The nose and throat specialist does not try nasal curettage to speculate what might happen after the operation. Contracting, distorting cicatrices of the endometrium subsequent to curettage of a damaging character should be expected. Practically the curette has done more harm than good.—*Byron Robinson, N.Y. Med. Jour.*

Action of Tea.

According to Brunton, tea may interfere with nutrition in three ways: First, by lessening the feeling of hunger; second, by rendering food less digestible, and third, by interfering with the digestive power of the stomach. At the same time that it thus lessens the nutrition of the body it enables the person to use up much more energy than he or she would be able to do without its aid, and the consequences of this are most evident in the effect on the nervous system. Although tea prevents the sensation of fatigue from being felt for a while, yet exhaustion is going on, both in mind and body, and this usually at length causes disinclination to either mental or bodily exertion, and tends to destroy the power of doing any useful work, either mental or physical, even when the attempt is made. Power of selfrestraint is diminished and the person becomes nervous, unduly sensitive, timid and emotional. Not infrequently ringing in the ears is felt, giddiness, headache, sometimes very severe neuralgia and tremulousness. The tremors seem to be more readily induced by green tea than by black tea, and Brunton has known of one case in which two or three cups of green tea were sufficient to induce marked tremor. Neuralgia is very apt to occur in nervous people who are able ordinarily to take a great deal out of themselves, either by sheer force of will or under excitement, and are thus more liable to reduce themselves below normal than those of more lymphatic temperament.

Neuralgia has been described as the prayer of a nerve for better blood and more of it, and tea, by enabling these people to take even more out of themselves than they otherwise could, will render their neuralgia more severe and more continuous. It is evident that a similar result is to be expected in regard to other nervous functions, and that the stability of the brain may be so seriously impaired that the combination of starvation and stimulation, produced by excessive tea drinking, will certainly produce a tendency to mental derangement, even if it does not actually determine its onset. In addition to its action on the nervous system, however, tea is a powerful stimulant to the circulation, and, if abused, will lead to feebleness of the pulse and to palpitation. All teas are not equally injurious. Ceylon and India tea are preferred by many people to China tea on account of their aroma and stimulating qualities, and, so long as they are taken in moderation and prepared in the right way by simply infusing for two or three minutes, and then pouring the water off from the leaves, they will suit healthy people very well. Whether on account of the higher proportion of tannin they contain, or some other reason which we do not yet know, they are not so good for weak digestions as China tea, which, especially if it is prepared in the way just recommended, by infusion for two or three minutes only, is less likely to cause dyspepsia than other kinds of tea. The physiologic action of tea is usually attributed almost entirely to the alkaloid, theine or caffein, which it contains, but Brunton does not think that this can be the case because green tea, which contains no more of the alkaloid than black tea, has a much more powerful effect on the nervous system, an effect which cannot be explained by the somewhat larger proportion of tannin, and must, he thinks, be due to some other constituents in the leaf. Green tea and black tea are not obtained, as many people suppose, from different varieties of the plant, but only differ in their method of preparation; the leaves which form the green tea being roasted in a pan shortly after they are plucked, while those that form the black tea are allowed to undergo a form of fermentation before roasting. Brunton sums up his paper as follows: Tea when properly prepared, and taken in moderation, is both useful and agreeable. When taken in too great quantity, or along with meat, when too strong when infused too long, or still more when boiled or stewed, it is apt to produce digestive troubles. When taken in excess it may produce nervous symptoms of the most serious character, and facilitate, if it does not actually produce, mental degeneration.—*Practitioner and J.A.M.A.*

Miscellaneous.

Sacredness of Human Life.

A man is now confined in prison in France awaiting trial for the murder of his wife. He is the mayor of the town of Danpierre, and had always been considered a person of exemplary character and fine mental attainments. His wife had suffered for years with an incurable malady and he had been a devoted attendant at her sick bed. Her pain was so agonizing that she implored him to end her misery. Finally, he yielded to her pleadings and killed her. The crime—for crime it is in the eyes of the law—has been widely discussed by the medico-legal scientists of Europe. A similar case occurred in the United States a few years ago. The wife of a resident of Florida was an invalid, and having no hope of recovering her health, she begged her husband for a drug, which he administered, causing her death. He was convicted. There is an advanced school of thinkers in this country who assert that in certain circumstances it is justifiable to anticipate the slower processes of disease. That question has been discussed by medico-legal bodies in the United States and in Europe, but there is no organized body of scientists which has endorsed the principle that human life may be ended by physicians or others to secure release from pain. The physician practices his profession on the principle that where there is life there is hope. Life is sacred, and it seems impossible to defend the destruction of it solely to destroy pain. Much that is reckless and apparently cynical is heard nowadays about the advisability of putting to death certain classes of persons for whom there seems to be no hope in life—the afflicted, the maimed, the "degenerate." No good is likely to come of such suggestions, while discussion of the subject may influence morbid persons to commit acts which are criminal according to law, whatever the underlying purpose of the deed may be.—*Baltimore Sun.*

An Experiment in Seasickness.

Seasickness is not generally considered a serious disorder and its victims do not get the sympathy they deserve, considering the amount of human happiness that is even temporarily destroyed. Occasionally, however, it is a very serious matter to individuals and its public importance may perhaps be estimated from the fact that to it has been attributed the influencing of the fate of nations by the limitations of their sea power

which it caused. It is not altogether surprising, therefore, that there exists in France and possibly elsewhere in Continental Europe, a "League Against Seasickness." This body, it is reported, proposes to charter a steamer and invite some 600 physicians to sail from Hamburg, Antwerp and French ports to Lisbon at the time of the International Medical Congress. It is expected that experimental study of the subject will be conducted, and that in this way practical tests of the various methods of treating the condition can be carried out. The projectors should consult naval architects in the selection of the vessel or in the provisions for its outfitting and ballasting. If they secure a sufficiently lively craft, and the Bay of Biscay and other seas are propitious or unpropitious, according to the point of view, some valuable subjective and objective testimony may be educed. The experiment will be worth watching.—*J. A. M. A.*

Chloroform Death without Chloroform.

Prof. Raymond, of Paris, relates in the *Progrès Médical* for January 13th that when he was a student his professor was lecturing one day on the danger of death from chloroform and how to avoid it, talking over a patient who evidently understood little of the lecture except the words danger and death. When Raymond approached to begin to administer the chloroform the patient passed into syncope before a whiff of chloroform had been given, and it was a long time before he could be resuscitated. In a recent suit for damages for a death during chloroform administration, it was proved that the patient had been much afraid of the anesthetic, and had said to one of the assistants: "You will come to my funeral, won't you?" Raymond concludes that death may occur from sheer dread of the chloroform, and that the witnesses of such an accident are not responsible for the fatality.

The Irrational Stand of the Antivivisectionist.

The enormous sacrifice of animal life to provide the meat for the extra feasting at Christmas is the subject of comment by the *Medical Press* (London). "Man's merriment in this instance," it says, "is inseparably connected by long tradition with an enormously devastating sacrifice of life among the lower animals. . . . How many antivivisectionists, whose mental attitude commands our sympathy although not our respect, have ever paused to consider the inwardness of the Christmastide slaughter? Have they ever looked analytically

on this picture of the butchers' and the poulterers' shops on the one hand and on that picture of the scientific laboratories on the other? Here we see a vast sacrifice of life, representing a vast amount of cruelty, with the sole purpose of providing folk with extra food for their Christmas enjoyment. There we see carefully planned research carried out under the most humane conditions known to science, with one single end and aim, namely, the preservation of human life from suffering and from death. The great fundamental distinction between the two sacrifices of the life of the lower animals in the two instances under consideration is that one is intended merely to satisfy the greedy maw of jovial man, while the other is intended to save him from bodily ills of all kinds. How can a sane intelligence condone the butcher and condemn the vivisectionist? If any one said of the butcher what is said every day in the week about the vivisectionist, the antivivisectionist would retort that the objections were sentiment gone mad. Yet all the while he swallows the camel of animal food, but strains with restless and incessant bitterness against the gnat of vivisection. The life of the lower animals is subservient to him for food, for labor, for clothing, for ornament, for anything and everything in his narrow world, in short, save for the one high purpose of acquiring the knowledge of preserving the health and the lives of his fellow men. As men grow more intellectual and reasoned in their outlook, so will they be likely to regard the question of vivisection in its true perspective."—*J. A. M. A.*

The Successful Practitioner Reads.

There is something radically wrong with the man who has "no time to read." If he hasn't the time he should take the time, just as he should to eat and sleep. How else can he know what is going on in the medical world and what advances are being made? Does it ever occur to him that the reason he lost that case yesterday was because he is already behind the times—even though he is out of college less than five years? The fact that very likely would have saved the life was in the magazine . . . which he never took the trouble to open. No matter how successful he may be, sooner or later he will be replaced in the affections and confidence of the community by young Jones, who has hard scrabbling enough now, . . . but who is forging to the front, because he has "time to read." It's a strange thing, but you never hear of any men of the first eminence in the profession who have no time to read. Yet

they must be busy or all signs fail, for how else did they attain their eminence except by knowing things that others did not know, and doing things that others could not do. Read? Why, these men are continually reading. In their "spare moments" they not only keep up with the profession, but keep ahead of it. . . . "No time to read?" My dear friend, it isn't so. The trouble is that you are too lazy; . . . you had rather take a nap or have a "quiet smoke" after the labors of the day, or spend your time in some other idle way than to get right down to this building business—this making of better doctors. Gradually, how gradually you can hardly say, you got "out of notion," and now you delude yourself with the belief that you are "too busy!" My poor friend, you are going to have time enough "for reading" or anything else after a bit. Really, wouldn't it be better to take a little time right now, and keep "in the swim?" "Work?" Of course, it is, but it pays.—*Am. Jour. Clin. Med.*

Middle Ear Suppuration in Diabetes—By GROSSMAN (*Internat. Centralblatt für Ohrenheilkunde.*

In Lucae's clinic there have been admitted since its existence ten cases of middle ear suppuration in diabetics. Of these nine were acute middle ear suppurations, and one an acute exacerbation of a chronic suppurative condition. In one case both mastoids were opened. Author gives history of cases and then discussed them individually. He follows with an explanation as to which position may be taken in order to get a clear picture of the course of middle ear suppuration in diabetics, and a proper relation of cases of diabetes which came to mastoid operation, as compared to operative cases in non-diabetics. According to the experience of the Berlin clinic there were 22.7 per cent. of operative cases in diabetics as compared to 56.3 per cent. in non-diabetics. Grossman arrives at the following conclusions: 1. A particular frequency of middle ear suppuration in diabetes cannot be proven clinically. 2. But an otitis media in diabetics leads more often to disease of the mastoid process than in non-diabetics. 3. The cause is not due to an individual local disposition, but due to the decreased powers of resorption and a greater decline of the mucous membrane, early arteriosclerosis in diabetes, and a change in the composition of the fluids. 4. A characteristic form of mastoiditis diabetica does not exist. 5. Operative interference is as a rule borne well, even though the prognosis must be guarded.—*The Medical Fortnightly.*

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Original Communications.

SUPRACLAVICULAR LYMPH NODES IN GASTRIC CARCINOMA.*

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Considerable attention has recently been given to the secondary involvement of the cervical lymph nodes in cases of gastric cancer and its diagnostic value in obscure intra-abdominal conditions. In the *British Medical Journal,* April 29th, 1905, W. Mitchell Stevens reports a case of latent cancer of the stomach in which the diagnosis was made from the coincidence with the general symptoms of enlargement of the left supraclavicular glands. Autopsy confirmed the diagnosis and showed that the infection had been transmitted by way of the thoracic duct which was extensively involved by the growth. The writer refers to the clinical value of this sign and says that although particular attention was called to it by Troisier years ago, comparatively few cases have been reported. In the same journal on June 24th, 1905, Nathan Raw reports a case of carcinoma of the pancreas, with enlargement of this set of glands, in which the thoracic duct was probably the means of carrying the infection, although this was not demonstrated by the autopsy. *Apropos* of the preceding articles, T. Gillman Moorehead, in the *Journal* of July 6th, says that he "was previously under the impression that this channel of dissemination was well recognized and not in need of further demonstration." He then cites two cases of cancer of the stomach met with during dissection wherein extensive in-

* Read before the Toronto Clinical Society, December, 1905.

volvement of the thoracic duct, with enlargement of the left supraclavicular glands, occurred. Herbert E. Durham, in the same issue, mentions another possible means of involvement of these glands, viz., where the peritoneum has been invaded the infection may be carried by the lymphatics passing up behind the costal cartilages. He refers to some experiments on peritoneal infection in animals, in which the spread was shown to take place rapidly through these channels. It does not appear, however, how this route of transmission can explain the greater tendency to invasion of the left, as compared with the right supraclavicular nodes.

Having, like Dr. Moorehead, been under the impression that enlargement of the supraclavicular lymph nodes by way of the thoracic duct, was not uncommon in intra-abdominal tumors and that its clinical significance was generally recognized, I was surprised to learn that so few cases have been recorded. I wish, therefore to briefly report two cases coming under my observation:

Case 1.—Enlargement of the left supraclavicular glands in a case of disseminated crude tubercle of the liver.

C. R., aged 59, farm laborer, admitted to St. Michael's Hospital, under my care, November 29th, 1899.

Family history was unimportant. Patient took alcohol occasionally and used tobacco in moderation. Had never suffered from any serious illness except influenza four years previously.

Two months before entering the hospital patient had been working in a cold, damp silo, when he contracted what he considered to be a severe cold, with chills and fever. The latter had been recurring every morning between one and three o'clock, the shivering lasting for about an hour, followed by fever and profuse perspiration. Feeling exhausted he would then fall asleep; next day he would be dull and stupid.

Temperature ranged from 99 deg. to 104 deg. Patient slept well, but showed considerable emaciation and complained of feeling very weak. He suffered no pain, but could not breath deeply without some discomfort. Examination of the circulatory and respiratory systems revealed nothing of importance. Stomach showed a moderate degree of dilatation. Examination of the stomach contents after a test breakfast showed total acidity, 70; free HCl, 40; no lactic acid and no Oppler-Boas bacilli. Repeated examinations of the blood for the plasmodium malariæ were negative. Leucocytes were 10,000 per c.mm., of which the polymorphonuclears formed 92 per cent. Urinalysis was negative. The liver was palpable an inch below

the costal margin in the mammary line. On palpation of the epigastrium, 2 in. below the ensiform cartilage, a lump could be felt. This lump was smooth, not painful to pressure and moved up and down with respiration, being evidently in the left lobe of the liver; no umbilication could be made out. The lymphatic glands above the left clavicle were enlarged, but they were painless and distinct from each other. On December 4th, Dr. Bingham removed one of these glands and microscopic examination showed tuberculous caseation. The condition was, therefore, considered to be tuberculosis of the liver, with secondary glandular involvement, though the primary seat of the disease or the point of entry of the organisms could not be determined. The patient continued to grow worse and died February 24th, 1900.

The autopsy was performed by Dr. Dwyer. The liver contained many masses scattered throughout its substance, varying in size from a walnut to a hen's egg. The primary source of the trouble could not be determined, the liver showing much the most advanced process, unless an old fibrous pleurisy, which was found in both sides, be excepted.

Subsequent examination of the liver showed the condition to be a tuberculous cholangitis. Many of the caseous masses were practically free in smooth-walled cavities, which were considered to be the dilated ducts, and surrounded by a thin mucopurulent-looking fluid. The fluid contained myriads of tubercle bacilli. This case is interesting, owing to its rarity and from the fact that the diagnosis was arrived at by removal of one of the enlarged glands. The condition of the thoracic duct, however, was not noted at the autopsy.

Case 2.—J. M., aged 49, teamster, entered St. Michael's Hospital under my care August 22nd, 1905. Family history unimportant. He had never suffered from any serious illness. Had used tobacco and alcohol in moderation.

Patient had been running down in health for the past four years, but had been able to work until a month before entering the hospital. For some time past he complained of feeling weak across the stomach, and the taking of food was followed by severe pain. No vomiting ever occurred. Bowels were constipated. He had often noticed of late that the stools were tarry in color. About five weeks before entering the hospital he noticed enlargement of the glands above the left clavicle. These were quite tender on pressure. He was sure that they were smaller when he entered the hospital than they had been sometime previously.

Patient was much emaciated, and the skin and conjunctivæ were slightly jaundiced. Examination of the circulatory and respiratory systems elicited nothing of importance. The liver was palpable about two inches above the level of the umbilicus in the mammary line. On inflation of the stomach, the great curvature was found as low as the umbilicus. Opposite the eight and ninth left costal cartilages a lump could be indistinctly palpated, and at the level of the umbilicus and to the left, an elongated mass could be felt. Both these masses moved up and down with the respiratory movements. The recti muscles were slightly rigid above, and some tenderness on palpation was complained of. Examination of the stomach contents showed the absence of free acid; no Oppler-Boas bacilli were found. After entering the hospital the pain, on taking food, disappeared. Patient, however, began to suffer from severe pain in the right lumbar region, radiating to the front of the abdomen in the iliac region, and passing down into the thigh, especially along the sciatic nerve. The epigastric tumors became more prominent and the patient's general condition worse. The left supraclavicular glands continued to enlarge slightly while he was under observation. He died on October 2nd, 1905.

A diagnosis of carcinoma of the stomach, with secondary involvement of the liver and thoracic duct, and through the latter, of the cervical lymph nodes, had been made.

Autopsy confirmed the diagnosis. About midway between the cardiac and pyloric orifices of the stomach, a large oval-shaped projecting mass was found, extending from the greater curvature up the anterior wall. A number of hard nodular masses, the size of a walnut, were found in the great omentum just below the stomach. The surrounding glands, including the retroperitoneal, those in the portal fissure and about the head of the pancreas, were much enlarged. The receptaculum chyli was involved in a mass of cancerous tissue, and the thoracic duct showed irregular nodular enlargements along its course, encroaching upon, but in no place completely occluding, its lumen. Near the upper extremity of the duct a number of enlarged glands were noted. The posterior mediastinal glands were enlarged and numerous small yellowish-white nodules were found scattered throughout both lungs.

Microscopic examination of the tumor showed the structure of a columnar-celled cancer. The extreme pain in the right lumbar region, radiating forward to the abdomen and passing down into the thighs, was readily explained by the pressure

of the enlarged glands on the lumbar and sacral plexuses, noted at the autopsy.

In this case the diagnosis was not difficult, and it is interesting only from the coincident involvement of the left supraclavicular glands by way of the thoracic duct.

The following resume of the literature on the subject may be of interest:

Troisier's first article was published in 1886; others appeared in 1888 and 1889. In 1890 he reported a case of primary cancer of the left suprarenal body in a man 34 years of age, with involvement of the thoracic duct, left supraclavicular lymph nodes, and generalized secondary cancer of the lungs. The patient suffered from dyspnea and pulmonary hemorrhage. During one of these attacks the patient expectorated a gland, which examination proved to be cancerous. Death resulted from asphyxia, and autopsy showed the lesions abovementioned, along with involvement of the lumbar, posterior mediastinal, prevertebral and bronchial glands.

Riegel afterwards called especial attention to the clinical significance of enlargement of the left supraclavicular glands, stating that the one usually first to be involved is situated behind the posterior border of the sterno-mastoid.

Ewald, dealing with the subject, dismisses it with the statement that "the swelling of the supraclavicular glands, which was first claimed by Henoch and Virchow, and later by many others, to be a pathognomonic symptom (of cancer of the stomach) is, in my opinion, a rare and by no means constant occurrence." The editor says Lipine observed it in only three out of forty cases on which autopsies were performed. In an analysis of 150 cases occurring in the Johns Hopkins Hospital by Osler and McCrae, the left supraclavicular glands were analysis of 150 cases of cancer of the stomach occurring in the Johns Hopkins Hospital by Osler and McCrae, the left supraclavicular glands were enlarged in 22 cases, or nearly 15 per cent.; the left axillary in noted in 36 per cent. of their cases. No mention of the Martin, Robson and Moynihan, D. D. Stewart, Eichorst and others, refer to the clinical significance of the sign, the first named mentioning the thoracic duct as the means of carrying the infection.

On the other hand, I can find no reference to the matter in the works of Hemmeter or Sidney Martin, nor in the articles on "Cancer of the Stomach," by Hale White, in Allbutt's system, nor by Riegel, translated by Stockton, in Nothnagel's Encyclopedia.

It will thus appear that the occurrence of enlargement of the left supraclavicular glands in cases of gastric carcinoma, by many authors, is not alluded to. Others refer to its clinical significance without alluding to the thoracic duct, as the means of transmission of the infection. From the clinical observations of Troisier, Osler and McCrae and others, it is evident that the occurrence is not a rare one, and in the smaller number of cases where the thoracic duct has been carefully examined post-mortem, this channel has been shown to be the route of transmission of the infection. In this way, moreover, we have a satisfactory anatomical explanation of the clinical fact that the left supraclavicular glands are almost invariably the ones to be enlarged. The following conclusions therefore appear warranted:

1. That enlargement of the left supraclavicular glands occurs in a small proportion (15 per cent., Osler and McCrae) of cases of gastric carcinoma.

2. That the thoracic duct is the route of transmission of the infection.

3. That the statement of Riegel, quoted by Osler and McCrae, may be accepted that "This symptom is a valuable positive one (of gastric cancer), but its absence should not be considered as of any value against the presence of gastric cancer."

4. That the enlargement may occasionally occur in carcinoma of other abdominal organs, and also in some microbic infections.

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HYPERNEPHROMA.

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Anatomical Description of Tumor.—The growth retains the general shape of the kidney, and raises the surface in places to about one centimetre. It is composed of discrete and confluent yellow nodules and is separated from the kidney substance by a capsule. This is very thin where the growth bulges in nodules of varying size externally, and internally where it distends the pelvis of the kidney. It is situated in the upper half of kidney, extending from the upper pole to the hilum, occupying the pyramids and cortex. The pyramids are distinct in remainder of kidney. A small portion of kidney substance only is present at the pole. The length of the kidney is 15.5 c.m., its breadth 9.0 c.m., and its depth 5.5 c.m. Its maximum girth is 21.5 c.m. Its capsule is slightly thickened, but strips easily. Its weight is 14 ozs. The growth measures 10 x 9 c.m. A layer of kidney substance surrounds the growth, but is less than 1 m.m. thick over superficies. On section it has a variegated or foliated appearance; its color is mostly yellow, but bands of semi-opaque, whitish-red tint are present, which divide it into rounded compartments, the largest 2 c.m. diameter, the smallest 2 or 3 m.m. These have a somewhat honeycombed look, and in places contain dark reddish plugs. In places the tumor contains dark red areas, as of hemorrhage. It is firm generally to the touch, but friable in places. The pelvis does not appear to be invaded. The calices and papillæ are lost where the growth is situated.

Pathologic Histology.—The growth is composed of stroma and cells, and it may be described as an adenomatous type of epithelial tumor. The stroma is composed of fine vascular connective tissue on which the tumor cells rest. In most places this may be described as a capillary meshwork. In places the stroma consists of wider bands of fibrous tissue. This contains endothelial-lined spaces and in places collections of round cells and golden brown granules of pigment. The cells vary in appearance greatly. Mostly they are large and polyhedral, and have a pale, swollen appearance, somewhat resembling the cytoplasm of sebaceous gland cells. Osmic acid and sudan iii. show these to be in an advanced stage of fatty degeneration. Owing to this condition micro-chemical tests did not demonstrate the presence of glycogen (1). In places

the cells have a frothy appearance, being in process of disintegration, but as a rule the cell membrane can be traced. Cells are high and sub-columnar in other places where an adenomatous or tubular appearing picture is seen in rounded compartments. Papillary masses grow into the spaces of the stroma here. The resemblance to tubules is explained as due to the disposition of cells in single or double rows, or to the arrangement back to back in the rows. Hemorrhages recent and old have occurred in these areas. A delicate meshwork of fibrin which takes the Weigert stain lightly, occupies large spaces. A very minute coccus-like body, in rows of four or five, and sometimes in fours, is seen among and in the degenerating cells of the growth. The nucleus is rounded and somewhat pale as a rule and contains nucleoli and a moderate amount of chromatic network. It is often surrounded by clear perinuclear space. With eosin and methylene blue (Unna) the nucleoli take a deep blue and the linin and nucleoplasm pink color, but the reaction is not constant. Some cells have eosinophilous, nuclear-granulated and blue nucleoli. Toluidin blue and acetic acid show a vacuolated appearance of the nuclei, but no meta-chromatic staining. Though many of the cells were extremely large, there were no true giant cells seen. Mitoses were not examined for specially, and heterotypic mitoses were not seen.

The adjacent portions of kidney show compression of tubules and marked frothy, degenerative changes of parenchyma with a few interstitial foci of round cells. There is some thickening of intima of small arteries, a very small coccus in places. The glomeruli are widely separated from the capsule of Bowman, and appear compressed or shrunken, and are compressed in capsule of growth. Everywhere the renal tissue is sharply demarcated from growth.*

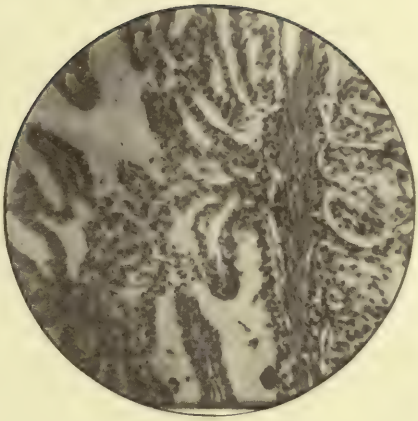
Nature of Growth.—The term hypernephroma has been applied to these tumors by Birch Hirschfeld, as signifying any tumor of adrenal genesis.† Their morphology is variable and classification is impossible or very difficult on histological distinctions. Some are said to resemble carcinoma (especially in metastases), others sarcoma (Kelynack justifies this by the acceptance of the mesoblastic origin of suprarenal body). In 1883, Gravitz claimed an adrenal origin for these growths which were known as renal lipomata, and described them as

* McWeeny, Brit. Med. Jour., Feb. 8, 1896, p. 323, and Hektoen and Riesman, Text-Book of Pathology, p. 984.

† Kelly. Hypernephroma, Ziegler's Beiträge, xxiii, 280, 1898, p. 921, and Phila. Med. Jour., 1899, and July, Aug., 1898.

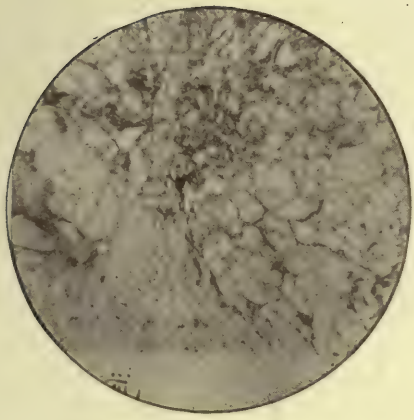
No. 1.

1. Renal Glomeruli. 2. Fibrous Septum.
3. Villous Growth.



No. 2.

High magnification of portion within circle (No. 1).



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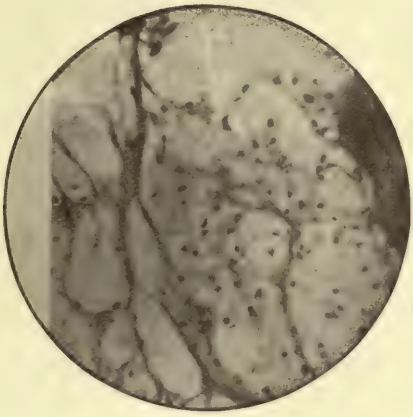

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HYPERNEPHROMA OF KIDNEY.

strumæ lipomatodes aberratæ renis. Since then they have been variously attributed to the epithelium of the renal tubules (adenomata), and to the endothelium of the perivascular lymph spaces (angiosarcoma and endothelioma). The embryological origin of the adrenal cortex has been described by Weldon (2) as from the Wolffian bodies, which enclose blood vessels and nerves, or from the protonephros, in which case they would be epithelial (3). Balfour, Mitsukuri and Minot derive adrenals from a "mesenchymal anlage," the mesothelium on each side of vena cava forming twisted cords, separated by blood vessels, and from a sympathetic anlage of cells from sympathetic ganglia. These anlages unite closely (4). Creighton and Arnold consider the distinction between the cortex and medulla as arbitrary and the differences observed as produced by modification in the arrangement of compact parts, there being no real difference between the cells. At about the sixth month there is no special distinction between the cortex and medulla of embryonic human adrenal (5).*

Thus, although the medullary substance of the adrenal appears to be intimately related to the sympathetic nervous system, the entire organ is part of the urogenital apparatus in origin (6).

The presence of adrenal rests or supernumerary adrenals in urogenitary tract is stated by Bayard Holmes to be found in 90 per cent. of all post-mortems (7). R. Williams finds 1 primary adrenal growth in 8,378 consecutive cases of malignant disease. It is known that the suprarenal body is continuous with the front part of Wolffian body (Weldon, Tanosik, Lochwood) even to late intrauterine life, and may be derived from the front of the Wolffian body (the latter extends from lower end of adrenal along ureter to ovary or epididymis). Lochwood points out that at seventh week in human embryo the suprarenal body is larger than the kidney and extends by its lower end downwards in front and to inner side of kidney, occupies the hilum of the kidney and is continuous along the course of the ureter with upper end of Wolffian body. The glomeruli of the Wolffian body are also continued into lower end of suprarenal body (8). Though oftenest found in the connective tissue about the main adrenals, Morris states that bodies identical in structure with suprarenal capsule are found in cortex of kidney, in perinephric tissue, in mesentery and be-

*Good descriptions of the microscopical characters of these growths are given by Hektoen and Riesman, by McWeeny. Mallory and Southard describe the pathological characters in cases of Thorndike and Cunningham; also Boyd and McFarland.

neath capsule of kidney (9). Rolleston has also shown that even in adults the gland is often prolonged into renal hilum, and that supernumerary suprarenal bodies may be found along the renal and spermatic veins. Andrewes describes them in so-called fatty tumors of spermatic cord (10); Schmorl and Oberndorger in the right lobe of liver (11); Marchand (12) and Targett in the broad ligament of (fetal) uterus and in round ligament and in inguinal canal.

These findings may be summarized as follows (13) as favoring the adrenal origin:

1. The situation of the tumor beneath the kidney capsule, the usual site of aberrant adrenal tissue.
2. The similarity of adrenal tumors and of those in question.
3. The sharp distinction between the growth and the renal tissues.
4. Dissemination by the blood stream, *via* the veins, rather than by the lymph glands of the kidney.
5. The resemblance of the tumor cells to those of suprarenal cortex.
6. The presence of fat drops and glycogen in the cells, as is usual, not in the adrenal, but in its new growths.
7. The staining quality of the nucleoli, differing from that of the nucleus, rarely, if ever, seen in renal adenomata.
8. The presence of giant cells, as in growths of adrenal.
9. The existence of an abundant capillary network, as in suprarenal cortex.
10. The presence of lecithin in amounts approximating to those characteristic of suprarenal tissue.

These growths are to be distinguished from those arising in remains of the Wolffian bodies which may be retro-peritoneal in site. According to Birch Hirschfeld, those "embryonal mixed tumors" (Brusse) known as "adenosarcomas," may also arise from renal rests of these bodies. They are characterized by their enormous size, by the presence of muscle cells, striped and non-striped, and by early metastasis.

These latter and hypernephromas show well the intrinsic relation that exists between "abnormal growth" and neoplasms; both show the phenomena known as metaplasia and heterology of tissues. Their complexity of growth is clearly associated with their origin. Yet in neither, in certain respects, is the deviation from the typical characteristic of heterology carried so far as in carcinomata. In mixed tumors of children there is no true bursting through of basement mem-

brane, no true peripheral growth of epithelial cells. Again, hyperemia may be benign, but is usually malignant. While it grows rapidly, recurs locally after removal, and disseminates by the blood stream, not by lymph canals, it is, as a rule, not so malignant as carcinomata or sarcomata. The malignant hypernephroma (whether of the cortex or medulla) bears the same relation to the benign or latent form as teratoma to dermoid, or carcinoma to cystadenoma. They resemble "general thyroid malignancy" in their power of mimicry of the adrenal structure in secondary deposits (14). In short, they are instructive examples of the links in structure that unite simple and malignant growths, and which I have pointed out before (15).

It is hoped that further work may be done on the biochemical and physical changes producing and accompanying this aberrant form of growth.

P.S.—I take this opportunity of expressing my thanks to Mr. A. H. Buch, F.R.C.S., for permission to publish the case, and to Mr. G. Bate, M.B., F.R.C.S., Senior House Surgeon, for the beautiful microphotographs, and to Mr. Henry Morris and Mr. Bland Sutton for their kind references.

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NASAL ACCESSORY SINUS DISEASE.

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By JOHN HUNTER, M.B.

These post-graduate clinics serve many useful purposes, one of which is the opportunity they give to discuss some of those diseases we overlook so easily, because they do not occur frequently enough to keep our attention directed to them. Nasal accessory sinus disease belongs to this class. A patient may carry around for many years a septic tank in the way of an empyema of one of these sinuses. For example, a man in London, England, consulted quite a number of physicians, each of whom treated him for a different ailment—neuralgia, tic-douloureux, the protean forms of gastro-intestinal disturbances, etc, with little if any relief. At last he consulted a rhinologist, who detected antral disease. An opening was made and the sinus washed out. The patient returned in two weeks and said, "These are the first two weeks of good health I have had in ten years." The repetition of such histories suggests the question, viz., "Do not our errors in diagnosis and our inefficient treatment vie with the brazen advertisements of the daily press in aiding the charlatan?"

I shall endeavor, in the few minutes at my disposal, to call your attention to the position of these nasal accessory sinuses, their relation to one another, the pathological conditions produced by disease, the etiology, symptoms and treatment.

The Maxillary Sinus is a large cavity, hollowed out of the superior maxillary bone. At birth the alveolar process is almost in contact with the orbital. During the first decade of life these processes are separated by a deposit of cancellous or spongy tissue, which becomes absorbed during youth and early adult life. The other cavities are also absent at birth, and, as they develop in the same way, this condition need not be referred to again.

This sinus varies very much in size. The average height is about 1 1-2 inches, breadth, 1 inch, and depth (antero-posterior) 1 1-4 inches. The walls may be quite thick or mere shells. The cavity may be divided by partitions. This fact explains the difficulty sometimes experienced in finding pus after an opening has been made. The partitions have to be broken down, and the whole cavity explored. I wish to call your attention to the position of the opening between the

antrum and the middle meatus, as it has a most important bearing on the question of drainage. Its position on the inner wall resembles the fanlight so often seen over a bedroom door. It is high up, so that with the body erect the cavity might be two-thirds full of pus, and yet none escape. It is necessary to have the patient either lie on the opposite side, or bow the head downward toward the knees to have the contents of the cavity flow into the middle meatus. There may be a second opening further back.

Frontal Sinuses.—These cavities are placed above the root of the nose. They are separated by a septum, which may or may not be centrally placed. They may extend between the plates of the frontal bone, or those of the roof and floor of the orbital cavity. This explains why the eyeball is displaced when pus from the frontal sinus accumulates either above or below it. The normal opening is in the most dependent portion of the floor, hence the efficient drainage of the frontal sinus. There may be direct communication between this sinus and air cells in lachrymal and ethmoidal bones, and the contents of cells and sinus may mingle and flow downwards and backwards into the maxillary sinus. I shall endeavor, by a somewhat crude illustration, to show how this takes place. You may imagine the uncinate process as a small semi-circular trough, attached to the upper and anterior portion of the wall of the middle meatus. The anterior end of this little trough is so placed that it catches any discharge from the frontal sinus and anterior ethmoidal cells. The posterior end of the trough reaches to the opening between the maxillary sinus and the middle meatus. It is seen then how readily the latter sinus may be infected from the former. On the other hand, if much force be used in washing out the maxillary sinus, infectious matter may be carried along this little trough upwards and forwards into the frontal sinus.

The Ethmoidal Cell Labyrinth.—The ethmoidal bone is divided into three portions. The perpendicular plate, forming part of the nasal septum, the horizontal cribriform plate, and the body or labyrinth, which is situated between the nasal cavity and the orbital. The ethmoidal labyrinth consists of a number of cells. The middle turbinated bone divides these into two groups—anterior and posterior. The contents of the former, as already noticed, empty into the infundibulum or upper and anterior portion of the middle meatus. When the discharge from these cells and from the frontal sinus is exces-

sive it may overflow the little trough or gutter-like channel formed by the uncinate process, and escape into the anterior naris. The posterior ethmoidal cells empty into the superior meatus or sphenoidal recess, situated in the upper and back part of the nasal chamber. The discharge flows backward into the naso-pharynx. The ethmoidal cells may extend laterally between the plates of the orbit, hence the involvement of the eye in disease of these cells. A posterior ethmoidal cell may communicate with the sphenoidal sinus.

The Sphenoidal Sinus.—This cavity is formed in the body of the sphenoid. A septum divides it into two portions. It is placed centrally, and at the upper and back portion of the roof of the nasal chamber. Its walls may be very thin, hence the risk of penetrating the cranial cavity in using a probe. Its opening is about the middle of the anterior wall. Discharge from this sinus escapes backwards into the naso-pharynx.

The Pathological Conditions Produced by Disease.—These vary with the character of the infection. In simple hyperemia the mucous membrane becomes swollen, and the flow of serum and mucus increased in quantity. If the swollen membrane occlude the opening and prevent drainage, the contents of the sinus may become purulent. The destruction of mucous membrane, periosteum, or osseous wall will depend on the virulence of infection and amount of pressure exerted by the retained fluids. Polypus, myxedemata, and the lesions produced by syphilis, tuberculosis, and the different forms of malignant disease may be present.

Etiology.—Sinus disease has been found much more frequently since the advent of la grippe. The exanthemata, *e.g.*, scarlatina, measles, etc., are exciting causes, as are also diseased teeth, typhoid fever and pneumonia. Syphilis, tuberculosis, morbid conditions of the vascular, digestive, respiratory, renal and genito-urinary systems, and all forms of nasal obstruction are amongst the predisposing causes of sinus disease.

Symptoms.—As these sinuses are most liable to become affected during an attack of la grippe, measles, scarlet fever, typhoid, or pneumonia, they come under the care of the general practitioner at a time when most amenable to treatment. There is always present the possibility of the symptoms of sinus disease being more or less completely masked by the symptoms of the general disease. If the physician fail to recognize the involvement of one or more of these sinuses, his patient makes

only a partial recovery, and worst of all, may have to carry about with him for years a septic tank, that impairs his health, and at any time may imperil his life. Intelligent and eternal vigilance should be ever the talisman of the physician in dealing with disease.

The symptoms may be discussed under two heads (1) acute, (2) chronic. In the acute stage the symptoms may be masked by the coryza of the concomitant disease. Attention should be directed to the quantity and character of the discharge. If the sinus disease be unilateral, the discharge may be much more copious and purulent from one nostril than from the other.

The Maxillary Sinus.—In addition to an increase in the discharge, especially when the patient lies on the opposite side, there may be neuralgic pain extending over cheek and forehead, tenderness on pressure, with photophobia and some elevation of temperature. A copious discharge often gives temporary relief. Within the nasal chamber the mucous membrane is red and swollen, especially that portion lining the turbinates. The middle meatus should be carefully examined, as pus is very likely to be found in this space, if the antral opening be not occluded.

The Frontal Sinus.—General malaise, fever and severe frontal headache, together with tenderness on pressure over the inner angle of the orbit are the symptoms most commonly met with in acute inflammation of the lining membrane of the frontal sinus. There may be some disturbance of the eye, a sensation of weight or pressure and edema of the upper eyelid. If the opening in the floor of the sinus do not become occluded, efficient drainage may prevent the appearance of any distinctive symptoms, other than an increased discharge from one nostril.

The Ethmoidal Cells.—Any discharge from the anterior cells flows into the anterior portion of the middle meatus, whilst that from the posterior group flows backwards into the nasopharynx. There may be rigors, fever, headache, cerebral and eye symptoms.

The Sphenoidal Sinus.—The symptoms are much the same as when the posterior group of ethmoidal cells is involved. In addition there may be intense pain in vertex of the skull, and in occipital region, together with sleeplessness and giddiness. On examination pus may be found in the slit between the nasal septum and middle turbinate.

Chronic Suppuration or "Latent Empyema" Nasal Discharge.—This will vary much in quantity. It may be limited to a few drops, which dry into a firm crust, or it may be quite

copious and of a purulent character. It is sometimes greenish, especially in disease of the frontal sinus. In regard to the odor, there is this marked distinction between sinus disease and atrophic rhinitis. In the former the patient himself is conscious of the odor, whereas in the latter he is not. The two conditions may co-exist. The amount of discharge varies according to the position of the patient, and to the extent of the obstruction in the nostrils from polypus or turgescence of the turbinate bones.

Pain is a very variable symptom. It may be absent altogether or present in the form of neuralgia, headache, or toothache. There is often mental depression or inability to fix the attention for any length of time. Tenderness on pressure may be elicited in diseases of the maxillary and frontal sinuses.

Secondary Symptoms.—Cough, laryngeal irritation, huskiness of voice, asthmatic symptoms, and the protean forms of gastro-enteric and neurotic disturbances.

Eye Symptoms.—We have already seen that the frontal sinus, ethmoidal cells and sphenoidal sinus may extend between the plates, forming the floor and roof of the orbital cavity. It can readily be understood how pus could easily enter this cavity and press upon the optic nerve and globe of the eye, producing impairment of vision and displacement. The movements of the eyeball, the condition of the sight, pain, photophobia, swelling of the lids, interference with the flow of tears, and congestion of the conjunctiva should suggest the possibility of sinus disease.

Treatment.—As Dr. Price-Brown will discuss the treatment of sinus disease at our next clinic, I will briefly summarize the few suggestions I have to make. When dealing with this, as with any other form of disease, we must never lose sight of the supreme importance of these two great factors, viz., correct diagnosis, efficient treatment.

In order to be in any way sure of our diagnosis in sinus disease, we must have very thorough illumination of the nasal chambers, in addition to a clear conception of the exact position of the sinuses and cells, and of their relationship to each other. With the ordinary forehead reflector and a bright, clear, steady light, or with an electric lamp, we can illuminate the anterior portion of the nares, and with the aid of the reflector and throat mirrors we can examine the posterior nares. If the room be dark enough, or if a dark cloth be thrown over the patient's head, we can, by means of a small electric lamp passed into the mouth, illuminate the frontal and antral sinuses, and study the

character of their contents. Dilate the vestibule with a nasal speculum and with a probe and absorbent cotton thoroughly cleanse the anterior and upper portion of the middle meatus. If pus reappear in a few seconds, suspicion is directed to the frontal sinus and anterior ethmoidal cells. After recleansing and cocainising, take a light silver probe, slightly bent near the tip and pass it up into the apex of the anterior extremity of the middle meatus. It often requires some careful manipulation to get the probe to enter the frontal duct. It may even be necessary to cut away the anterior portion of the middle turbinate bone. If the probe be passed backwards it may enter some diseased anterior ethmoidal cells, and liberate more pus. We now proceed to examine the antral opening, which we look for high up at the junction of the middle turbinate with the outer wall of the meatus. The nasal chamber, and especially the middle meatus, should be thoroughly cleansed with spray and probe. The patient is then asked to lie on opposite side, or bend the head downwards with face so turned as to have the diseased antrum uppermost. After a few minutes the patient assumes the erect position, and if pus be again found in the middle meatus antral disease may be suspected, or as has been already stated, this pus may have run into the antral cavity from the frontal sinus or anterior ethmoidal cells. If the frontal or antral sinus be filled with thick pus, or by a morbid growth, transillumination may show well-marked opacity in affected cavity. Pus flowing from the sphenoidal sinus or posterior ethmoidal cells is quite readily detected by passing a probe wrapped with cotton upwards and backwards through the superior meatus.

The treatment of nasal accessory sinus disease must be carried out along the well-defined surgical lines of cleanliness and efficient drainage. When the discharge has free egress, the antiseptic sprays and washes render effective service. A soft rubber catheter, closed at the end, but with perforated sides, is very useful. It is inserted well back in the nostril and then attached to a fountain or other syringe. After a thorough cleansing the affected region may be swabbed with a solution of argyrol (20 grs. to oz.).

Every form of obstruction in the way of hypertrophied turbinates, deflection of septum, polypi, etc., must be removed so as to secure free vent for the respiratory process. In these patients every function of the body should receive as much care as if the case were one of incipient tuberculosis. In the treatment, as in the diagnosis of sinus disease, it may be re-

peated again that intelligent and eternal vigilance must be the physician's talisman.

When occlusion of the opening has taken place, relief must be obtained by a surgical operation. Time will permit of only the briefest possible reference to this. The antral sinus may be opened through the socket of a molar tooth, the canine fossa under the upper lip, or the wall of the inferior meatus. It may be necessary to enlarge the opening in the canine fossa, in order to explore the whole cavity, to remove diseased tissue with the curette, and to pack with gauze.

The frontal sinus may be entered after enlarging its duct with a suitable drill, or burr, or through an external opening made at the inner end of the orbital arch. Diseased cells in the ethmoidal labyrinth may be reached by probe or curette after the removal of the middle turbinated bone. The opening in the sphenoidal sinus may be explored with a probe passed upward and backward through the narrow slit between the septum and middle turbinated. Great care must be taken in using the probe or curette lest it enter the cranial cavity through the thin roof of this sinus.

Whilst these operations are quite easily described on paper, yet the proximity of the sinuses to the orbital or cranial cavity, the need of artificial light, the limited area in which to work, the troublesome hemorrhage, and the use of special instruments make many of them to rank amongst the most difficult and hazardous operations the surgeon is called upon to perform. When the general practitioner has made a correct diagnosis and instructed his patient as to the proper course to pursue, he may very justly claim that it is his duty to leave the operation to the specialist, whose duty and privilege it is to acquire the necessary skill for such work.

Selected Article.

ABSTRACT OF THE ORATION IN SURGERY.*

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Few anniversary celebrations have ever been held in this country that have had or can have a wider significance than that in which we are now participating. It marks not only the centennial of a great and influential Society, in the greatest and most influential State in our Union, but it signalizes also the re-union of men and professional interests which have been too long kept apart by false sentiment and inability to maintain a common point of view. The occasion, then, is so memorable that I feel almost aghast at the task assigned me of trying suitably to characterize the surgical work which has been accomplished, especially within our own limits within the past century. At the same time, I value most highly the compliment conveyed by the invitation to deliver the centennial oration.

I do not know how I may better characterize one aspect of modern surgical progress than by quoting from an address delivered at the opening of the University College Hospital, in London, in the fall of 1873, by Mr. Erichsen, at that time justly considered to be one of the foremost of living British surgeons. In this address he dealt largely with the subject of *Finality in Surgery,* and expressed himself regarding it as follows: (London *Lancet,* October 4th, 1873, p. 489).

In no department of science had intellectual development brought greater changes in a comparatively brief space of time than in medicine. In surgery it appeared to him that there were two great schools: The Practical and The Scientific. A generation back the Anatomical School had reached its acme. Thirty-five years previously, surgery, as a manipulative art, had fallen into a sluggish and inactive state, and no advances had been made in the two greatest operations of surgery since Cheselden, a century before, had introduced his operation, or since Hunter had immortalized his name by his procedure for aneurism. He then went on to say: "But

* Delivered at the Centennial Meeting of the New York State Medical Society at Albany, January 31st, 1906.

there must be a final limit to development of manipulative surgery. The knife can not always have fresh fields for conquest and, although methods of practice may be modified or varied, and even improved to some extent, it must be within a certain limit. *That this limit has nearly, if not quite, been reached, will appear evident if we reflect upon the great achievements of modern operative surgery.* Very little remains for the boldest to devise or the most dexterous to perform." After which he very briefly alludes to the studies of Lister, who at that time was pursuing his painstaking researches almost within gun-shot distance of the place where Erichsen stood while making these remarks, researches which revolutionized the surgery of his day, and made that not merely possible but easily practicable which before had seemed unjustifiable or even criminal.

In the marvellous surgical accomplishments of the past thirty years we see the tremendous effect of the development of a theory and its application, since not until the *germ theory of disease* had been tested thoroughly and proven reliable by scientists (among whose names that of Pasteur must be always mentioned first), could rational methods be adopted for combating the minute and deadly enemies by which mankind is always surrounded.

Another theory, which must be credited to the past century, has had much to do with explaining many problems that interest us, perhaps not so much as surgeons, but as scientists—namely, *the theory of evolution.* In those earlier days this theory was rarely correctly stated; too often at present it is not correctly judged, and comparatively few can grasp its entire significance. In its briefest expression it means the establishment of an organic continuity between the lowest and the highest forms of life; but, taken in conjunction with an accurate knowledge of embryology, it has much to do with the explanation of many of the congenital defects and arrests of development with which we as surgeons have to deal.

The two greatest discoveries of the past century are one of British, the other of American origin; both, in other words, of Anglo-Saxon offspring. I allude, of course, to Anesthesia and Antisepsis.

When Wells introduced nitrous oxide gas, when Morton promoted the use of ether, and when Simpson first administered chloroform, there were placed before the profession, within a short period of time, three of the greatest blessings which a kind Providence has ever vouchsafed to mankind. It

is late in the years now to describe the horrors of the old-time operating room, or even to quote the vivid descriptions either of surgical clinics of the time or of the feelings of the operators who took part in them. If one desires to seek descriptions of such gruesome scenes he may find them, but will read them as one reads accounts of the Inquisition and its tortures. But this has all disappeared, and that the performance of an operation can now be robbed of all that makes it unpleasant and disquieting is one of the marvels of the century and one of its greatest accomplishments.

Indeed it means much more than the abolition of suffering; it means that that which was previously beyond human endurance is now placed easily within it; it means that that which was formerly considered inhuman and unjustifiable is now regarded as humane and scientific.

The introduction of anesthesia took away the most imperative need for rapidity, and the introduction of antisepsis required more time for attention to detail. In consequence, there grew up a certain school of men who seemed to feel that time was no object in operating, and that so long as the patients were comfortably asleep the principal indication was thereby met. It did not take long, however, for the profession to learn that the anesthetic itself is by no means a harmless agent, to be administered for indefinitely continued periods, but that it has its own disadvantages, and that the shorter the time during which the patient is kept under it the better for him. We have accordingly reverted somewhat to earlier conditions, and have learned that while time should not be sacrificed to other conditions of greater importance it nevertheless is of value, and that he is the best operator who, other things being equal, saves time so far as he can.

But what shall now be said of the changes effected by the introduction of antiseptic methods? There are those who can look back further than I can, and yet it has happened that quite within my easy recollection the whole aspect of surgery has been changed by the work of Lister and his coworkers. I can remember my first season as house surgeon, in one of the largest and newest of the Western hospitals, when throughout that long and, to me, sad season, scarcely one patient was submitted to any major or semi-serious operation who did not die of blood poisoning. I saw men die after what seemed to me even minor operations. Scarcely a patient entered the hospital with a compound fracture whose doom was not sealed. Tracheotomy was a useless performance; trephin-

ing was interesting as a spectacle, but useless as a resource. Even internal urethrotomy became a fatal procedure; and so throughout the list. This was in the years of grace 1876 and 1877.

What, then, can be said of the men and the method by whom and by which all of this horrid reality was changed, so that the practice of surgery became a pleasure rather than a solemn duty? The younger men who have entered the profession within recent years can never appreciate what it meant to practise in those earlier days, which yet are not so long past. Only he who has seen case after case of compound fracture go to the ground, as the result of preventable infection, can fully appreciate the necessity for the precautions which we take to-day, or can have within him that true feeling of reverence and love for the man who brought about this revolution. That to Pasteur a monument has been erected, and that Lister has been made an English lord, constitute but a small part of the respect and honor we should yield them. This, perhaps, is the best which a government of the aristocracy can do, but there is a higher position and a nobler one which they occupy, and ever will, in the heart of every surgeon, as of every one who is capable of appreciating what has been accomplished through their life and labors.

What shall be said next of the extension of research by which surgical pathology has been wedded to the study of surgery as an art, and made an inseparable part of a surgeon's self-preparation for his work? Next to asepsis and anesthesia the evolution of the surgical laboratory and the work done therein, constitute the most conspicuous advance in the science of surgery made during the past century. Not that surgical pathology is by itself a subject distinct from general pathology, but that it implies the application of the principles of general pathology to surgical problems. Here, as in many other places, the microscope and the test tube for minute work, and the introduction of experimental methods, both in the study of disease and the perfection of technique, have afforded opportunity for most wonderful discoveries and most striking progress.

I would divide the work done within a surgical laboratory under two headings,—the minute and the gross.

Under the title of *Minute Work* I would include that which is purely *histological,* that which would be ranked as *bacteriological*, and that which may be perhaps best spoken of as *biochemical.* By the Histological, the nature of the tuber-

culous, leprous, actinomycotic and numerous other morbid processes has been singularly cleared up. The works that have been published, for instance, on tumors alone, within the past four decades, would fill more than one shelf in any large library.

Under the heading, Bacteriological work, I would include the researches which resulted in that most important advance which we sum up under the title, the Theory of Sepsis and the Practice of Asepsis. The work done by Nicolaier and Kitasato on the origin and nature of tetanus, by Villemin and Koch in the study of tuberculosis, and by Neisser on the specific nature of the gonococcus, also come under this heading.

Of the gross work of a surgical laboratory I can give only illustrative examples. When Senn began his work and published his first experiences with intestinal anastomosis he employed methods which were crude, compared with those now in vogue, but they have since been widely extended and made available in various ways, of which in the beginning no one dreamed. The anastomotic method has been extended not merely from one part of the intestine to another, but from gall-bladder to the bowel—though this is to-day rarely done —and from the stomach to the duodenum, or to any other convenient part of the alimentary canal, while even by transdiaphragmatic methods it has been suggested to anastomose the stomach to the esophagus above the diaphragm.

The lessons thus taught by this work upon the bowel led to more vigorous prosecution of experimental work upon diverting other currents or other functions of the body and rearranging them to suit new needs. Thus, for instance, the method of nerve grafting has been widely extended, and made available in a large number of cases of infantile and other palsy, as well as for establishing nerve communication around injured or exsected nerves. Of this perhaps there is no more conspicuous illustration than the treatment of facial palsy by transplantation of the hypoglossal or the spinal accessory into the facial nerve. Nerve suture also has become a general expedient and one which it is criminal to neglect when demanded.

Similarly, tendons have been disengaged from their proper insertions and replaced anew, so as to utilize the power of muscles still active, and atone for paralysis of parallel or even antagonistic groups. Tendon suture and tendon grafting, then, have become every-day expedients for the correction of deformity and restoration of function, in which they have been wonderfully successful.

We have learned that among the tubular connections of the body, the ureters, like the intestines, may be resected, transplanted or anastomosed, as occasion may demand.

Similarly, even the blood vessels have not escaped the investigator's attack, and we have found that they may be sutured, either longitudinally or even by end to end suture, as the researches, especially of Murphy, brilliantly have demonstrated.

No more remarkable illustrations of what can be accomplished, at least in the laboratory, have been reported than those from the Hull Physiological Laboratory of Chicago University, by Carrel and Guthrie (*Am. Medicine,* Dec. 30, 1905, p. 1101). These experiments include such feats as reversal of circulation in veins and arteries, replantation of completely severed limbs and transplantation of the kidney and thyroid. Such experiments as the following, for instance, were performed: The heart of a small dog was extirpated and transplanted into the neck of a larger one, by anastomosing the cut ends of the jugular vein and of the carotid artery to the large vessels of the heart. The circulation was re-established through the heart, and it showed fibrillary contractions, beating at the rate of 88, while the normal heart was beating 100 per minute. Similarly a kidney was extirpated and transplanted into the neck, anastomosing the rental artery to the carotid artery, the renal vein to the jugular, and causing the ureter to empty into the esophagus. On the third day the circulation was normal and good excretion of urine was going on. So, too, with the thyroid, which was extirpated and replanted with reversal of the circulation. Forty days later it was easy to recognize systolic expansion of the gland.

Concerning blood pressure, on which none have done more brilliant work than Crile and Cushing of our own country, they have revolutionized our notions regarding surgical shock, they have shown the importance of both recording and maintaining blood pressure, they have demonstrated the value of the proper use of salt solution, and particularly they have given experimental proof of the marvellous nature of that singular substance, adrenalin.

Blood analysis has reached a degree of development and accuracy which cause it to rank with urinalysis, both in complexity and value. About all that was ever done in this direction one hundred years ago was an inspection of the so-called "buffy-coat" after venesection.

It is quite unnecessary to allude to the minute developments in urinalysis, which have not merely materially complicated it,

but have made it a most valuable aid in diagnosis. There are those who claim to gather much of diagnostic value from a minute microchemical examination of the saliva, while the importance attaching to an examination of the cerebrospinal fluid is year by year increasing.

Almost our entire knowledge of cerebral localization has been gained in the anatomical and surgical laboratory by a score of diligent investigators, a list of whose names should, by common consent, be headed by Sir Victor Horsley. A great deal has been done in explanation of the various traumatic disturbances of the brain, included under the terms "contusion" and "compression." Perhaps in this line of investigation the French surgeons have taken the lead, and yet much has been done at home. So with regard to infectious processes within the cranium. The researches and publications of Sir William Macewen have brought us a clear knowledge of the subject which no one had attained until he began his work. The relation between the various sinuses of the face and cranium and the interior of the brain box have been thus impressed upon our knowledge, and in such a way that surgery may now usually anticipate the evils of intracranial suppuration, if only the surgeon be given an early enough opportunity.

In the surgery of the spinal cord it remained for American surgeons,—Harte of Philadelphia and McCosh of New York —to show that suture of a completely divided spinal cord may be successfully made, with at least partial restoration of function, a demonstration which the ordinary laboratory has not yet afforded. Compression paralysis, moreover, has been made amenable to surgery, at least in many instances, whether a result of a morbid process, as in kyphosis, or of recent traumatism, and relief has been afforded which could not possibly have come in any other way.

Study next what has been done with special organs, and take first the heart. Modern surgery of the heart includes, not merely aspiration or opening and drainage of the pericardial sac, or incision into it for the purpose of breaking up adhesion, but includes actual attack upon the heart itself, there being now on record not a small number of instances of gun-shot or stab wounds where the heart has been exposed, the injury uncovered, and the heart substance sutured while still beating. A number of lives have been saved in this way which else would have been inevitably lost. More than this, massage of the organ has been successfully practised for collapse following

anesthesia, and it has been shown to be not only feasible, but justifiable, in such instances to open the thorax or the upper abdomen, if they have not already been opened, and, directly or through the diaphragm, deliberately seize or manipulate the heart, combining such massage with artificial respiration, and compelling it to expel the blood which may empty into it; thus in several instances snatching the patient from a yawning grave. Crile especially has shown how successful this measure is upon animals and has given the principal impetus to its practice in the operating room. The lungs have been made almost equally amenable to surgery. The earliest suggestions in this direction were made by one of our countrymen, Warren Stone. They were later improved upon by Estlander, who usually gets all the credit for it. Beyond this the lung is often invaded for abscess, gangrene, less often for hydatid cyst, tuberculosis or other granulomata, and even the more distinct tumors.

The operation of opening the larynx for suffocative conditions is an old one, but the extension of the method for any other condition than that threatening immediate death is a very modern development of the old idea.

On the esophagus extensive operations have been successfully practised, and foreign as well as American surgeons, Bryant particularly, have shown the possibility of attack both upon the esophagus and the lower end of the trachea; even the great bronchi; exposing them posteriorly through an opening made at the back of the chest.

Of the alimentary canal, what might not be said? We have learned that there is practically nothing which cannot be done with the alimentary tube from one end to the other, that no part or section of it is essential for vital purposes, that the entire stomach may be removed, and that several feet of intestine can be easily and comfortably spared.

In addition to this, the past twenty-five years have brought us a revelation regarding the possible morbid activities of the vermiform appendix and the disastrous consequences which may ensue upon involvement of this little tube. For widespread gangrene of the neighboring intestine, I have myself in one instance removed nearly nine feet of bowel, in another six, and in two others but little less; in all four instances successfully, and I have further shown, after a study of reported cases, that it would appear that the more extensive intestinal resections yield an even larger amount of success than do the lesser.

Regarding the pancreas, a large amount of experimental work has been done, by which many problems have been cleared up, even if not finally solved. In this experimental work many Americans have been engaged, none among them, however, doing better or more telling work than my colleague, Dr. Williams, in the University of Buffalo. The acute pancreatitis which might have been suspected twenty-five years ago on *a priori* grounds is now a demonstrated fact, with an equally demonstrated remedy.

Likewise the liver is no longer sacred ground, but in itself and in its adnexa is now frequently exposed to surgical attack, and with a marvellous amount of resulting benefit. Of the viscus itself it may be said that we not only open abscesses and hydatid cysts, but that we remove more or less extensive portions when involved in localized tumors or malignant growths. I have under my observation a patient from whom, nearly five years ago, I took away not only a large cancerous gall-bladder with enormous calculi, but a goodly portion of the surrounding liver. She is to-day doing her own housework and in all these respects as well as ever in her existence. When the liver is displaced it may be fastened in place, just as is done with the kidney.

The spleen becomes a legitimate object of surgery when crushed or ruptured by injury, when displaced so as to become troublesome, or when the site of abscess or of tumor. Moreover, its complete removal is indicated in cases of so-called splenic anemia, or Banti's disease, where the measure has given good results.

Very much has been done with the so-called ductless glands, among which the thyroid is the most prominent and most often attacked. All this work was at least begun and long continued in the laboratory, and not tested upon the human being until ample reason had been afforded by results of the experimental investigators. In consequence, the indications for operations upon the thyroid in the various forms of goitre are clearly defined, the only possible exception to this statement being in the case of exophthalmic goitre, where men still differ somewhat according to their notions concerning its pathology.

A large amount of laboratory and experimental work has been done with bones and joints. Murphy has accomplished much more of late by utilization of muscles and fasciæ than anyone ever could expect to with ivory balls and sockets driven into bone ends.

There is another category of surgical procedures of which

it might be said that they are the outcome rather of clinical observations than of laboratory work. Thus, for instance, in 1883, Van de Warker, of Syracuse, reported the case of an abdomen which he had opened, supposing that he had to deal with a minor form of hydrops. After incision and inspection it was discovered to be a case of tuberculosis of the peritoneum. The complete recovery of the patient led to the introduction of celiotomy as a curative measure, and the amount of good that it has accomplished is very great. Some surgeons simply open and evacuate, some wash out with salt solution, while, in my own experience, I have had the most encouraging results from complete evacuation and lavage and then the introduction of a credé lactate of silver solution in the abdominal cavity while closing it.

Operations for the radical cure of hernia have been practised from the earliest days of surgery, becoming perhaps a little less crude with each advancing century or surgical cycle. While every one desires to close the inguinal canal, there are so many ways of accomplishing this that one may well hesitate as to which is the best. Of late I have used, with gratifying success, when the length of the hernial sac permitted it, after ligation and fixation of its neck, either the entire sac, twisted into a small cord and used as a suture, being passed from one side of the ring to the other by means of a large needle with a large eye; or, when the sac is too large, I have not hesitated to make a strip from a portion of its structure and used this for the same purpose, after extirpating the balance. In this way I have found suture material of ample length of fresh animal tissue, which is sure to be aseptic, which utilizes something that else would otherwise be completely removed, and saves taking away a strip from the edge of the canal and thus widening or in any way weakening it.

Of laparotomy as a general measure we have lost all our dread. As performed for the relief of intussusception it was first done upon a negro slave by Wilson, in 1831. His patient had suffered for seventeen days; nevertheless the entangled intestine was successfully released and the patient made a complete recovery (Dennis). It was not, however, until after Lister's triumph that abdominal section became by any means a safe operation. At present it is everywhere performed, unfortunately, too often by those who have had insufficient experience. If in any way the mortality at present attaching to it should seem unduly large, although in reality small, it is partly ascribable to the fact that too many of the younger sur-

geons of the country think to win their spurs in the profession by a series of cases of abdominal section, for which it may be that experience and training have not yet fitted them. The larger one's experience becomes in this direction the less certain he is as to the interior conditions from exterior examination, and the more guarded he becomes in the descriptions of what he expects to encounter. Thus it too often happens that a case which appears simple is complicated in a way to demand the ripest experience of an expert operator. The last quarter of the century has seen an extraordinary increase in the number of abdominal sections done in all parts of the world, for which there is perhaps much good reason. As the factor for safety has increased, one sentimental objection to its performance has disappeared, while the great advantage accruing by substitution of accurate knowledge acquired by the operative method for previous guesswork is obvious, even to many patients. Moreover the importance of early attack upon cases of cancer is more and more widely appreciated, and I fear no opposition to a statement, which may be regarded almost as a challenge, and one that I have frequently made, that a well grounded suspicion of intra-abdominal cancer justifies a well performed explanatory operation, directed, first, to its determination, and, second, if possible, to its removal. In cases of cancer of the stomach, for instance, to wait until diagnosis can be made by the sense of touch, from the outside, is to wait until the patient has passed the period of safety, whereas if, so soon as cancer is suspected, a judicious operator were entrusted with the case he might do much to prolong life and make it comfortable, even were it still too late to make a radical operation. If this be true of cancer of the stomach, it is equally true of most other visceral cancers in parts which are open to surgical attack.

Of course, you will say I have so far omitted all reference to that epoch-making operation of MacDowell's, who performed his first and historic ovariotomy 97 years ago, *i.e.*, in 1809. So much has been said about it, and it is now so generally known and widely credited, that it seems hardly necessary to do more than mention it as perhaps the most historic event in surgery in America in the first part of the previous century. Of that to which it has led other writers of far more graphic power have written at length. When in 1821 Nathan Smith did ovariotomy in Connecticut, while still ignorant of MacDowell's performances, upon which he improved by dropping the pedicle into the abdominal cavity, he certainly

gave it great encouragement. Allan G. Smith also successfully imitated it in Kentucky, in 1823, and D. L. Rogers in New York, in 1829. Not until seven years later was the operation first performed in England, and not until fifteen years later in France. In the surgery of the ovaries and of the ovarian cysts much, nay nearly all, is due to the work of American surgeons. T. G. Thomas, in 1870, first devised and successfully made a vaginal ovariotomy, while Battey popularized vaginal oophorectomy in 1872, and Sims contributed of his own methods and experience in making the vaginal route an effective and serviceable one for a variety of pelvic conditions.

One of the most important surgical developments of recent times has been the more rational treatment of cancer. While the etiology of this scourge of humanity is still not clear, and while men who are giving up their lives to its study are still disputing as to its nature and origin, we have nevertheless learned a great deal about it. It stands to the credit of the State of New York that it was the first government in the world to inaugurate an institution for the scientific study of cancer, and the State Laboratory for the Investigation of Cancer, in connection with the University of Buffalo, is entitled to the credit of being the pioneer institution of its kind in the world. As yet neither there nor elsewhere have been worked out such final results as to justify one in claiming positively any given origin for this disease. Without committing its staff, therefore, or without placing responsibility for the statement upon anyone else, I nevertheless feel no hesitation in saying that among the most careful workers and thinkers in the world to-day the parasitic theory is assuming an ever-growing importance, and I say this advisedly, and in spite of the opposition which such a statement frequently creates, and in spite of objections which may be raised against it. The statement is the outcome of personal acquaintance or correspondence with the men whom I consider the keenest in this line of research, as well as of familiarity with what has been recently written by them and by others. The trouble has been that the profession are not yet ready for the statement, and one may easily prophesy that for a long time they will not receive it, not, at least, without most serious questioning, nor, for that matter, should they. Nevertheless all other lines of investigation lead up to mere negation, whereas work done in this direction leads ever to more and more fruitful results.

It is of sufficient importance to remind you here, by way

of digression, that cancer occupies a unique position in the classification of diseases. It is perhaps the only disease of which it can be said that in and of itself it has no symptomatology; to which may be added that it has scarcely a distinctive sign by which it may with certainty be recognized. One must take several factors into consideration in diagnosing even a superficial growth, and deep growths baffle the best diagnostic skill. In cancer of the stomach, for instance, there is not a single feature which is not met with in other cases, and the same is true of almost every organ of the body. This is a sad confession to have to make regarding a disease which kills annually in our own State six thousand individuals, but it lends plausibility to the general wisdom of making early explorations, since only in this way can the senses of sight and touch be brought into advantageous co-operation with the arguments obtained by inductive processes alone.

But it is not my object in this address to go deeply into this subject. It must be said, however, that the studies just alluded to have led to a very much clearer recognition of the clinical aspects of cancer, and, consequently, to much more accurate notions regrading its treatment. In some respects, at least, most surgeons are agreed—namely, that cancer is in the beginning a local disease, and, as I am fond of putting it, *if* it could be recognized in time, and *if* it could be made accessible, and *if* it could be early and thoroughly removed, it would be, in most cases, at least, a curable disease. However, the "ifs" in the above statement are exceedingly important, and the very nature of the disease makes it impossible to successfully apply these canons of treatment in many instances; but the statements do apply to all cancers which are within reach and which may be diagnosed early by any one of the various means or methods serviceable for the purpose. And matters have now gone so far in the direction of earlier recognition of, and surgical operations for deep-seated cancers, especially within the abdomen and even the cranial cavity, that I have never hesitated to lay down the following rule, with a challenge to any one who may desire to controvert it—namely, that a well founded suspicion of deep-seated cancer justifies, in the first place, an exploratory operation, directed, at first, toward its recognition, and secondly, if possible, toward its relief. Were application more frequently made of this general principle by competent men (let us hope never by incompetent men) we should have fewer deaths from this awful disease.

Another conspicuous feature of the century's growth and

progress has been the development of the perfected modern hospital, which bears no more relation to the ancient institution of that name than dies the modern microscope to the simple lens which was known to Roger Bacon.

Hospitals provide mainly for local needs and are supported both by private and public generosity, but there come occasionally calamities and wars which make demands that no fixed hospitals can supply. It is to meet the need of such exigencies that the Red Cross Association was founded, and it has been in furtherance of its objects that devoted men and women have sacrificed their time, their labors, and even their lives, in doing good to others, relieving the distressed, caring for the sick and wounded, and demonstrating the noblest of human and humane traits. It is doubtful if altruism can reach a higher degree of development than has been evinced by those who have so nobly performed these duties.

So far we have dealt with the past and the present. What is to be said of the future?

Each Year Book of Surgery shows us that it is still too soon to speak, as did Erichsen, of Finality in Surgery. The records show that practically no part of the body which is accessible by any route has been omitted from experimental attack; time may still be required to indicate whether these attacks are to be frequently repeated or not.

The so-called "anatomical surgeon" of the past generation has practically found his limitations. Gross anatomy holds but little now in store for even the most conscientious student. Therefore, the day of the surgical anatomist and operator alone has passed, unless to his purely anatomical knowledge he has added much of collateral origin and interest. To every surgeon, however, more and more must come that final knowledge of anatomy gained only through the microscope, and employed to his advantage in studying, as well, the process of repair as of disease. Such additions, for instance, to our knowledge as have been afforded by recent investigations concerning the neurons have a far-reaching significance which entitles them to the consideration of the surgeon as well as of the neurologist.

Into surgical pathology our surgeons must be led ever more and more deeply, sometimes by direct, again by devious ways. That the surgical laboratory will maintain a more and more important position, both in surgical teaching and in preparation for surgery, must go without saying. In surgery, as well as in general medicine, though probably in lesser degree,

we shall learn that, to use an Hibernicism, the best way to treat disease is to prevent it. In so far as we draw nearer to a discovery of the foundations of life, the surgeon will profit with the biologist and the general practitioner. The future is too misty to say where we shall find ourselves in this regard at the end of the second century of our existence.

The tendency of late has been for the surgeon to drift away from the internist, for reasons which are obvious to all. He has, however, in my estimation, drifted too far and needs to come back into closer correlation with his colleagues and closer comparison of methods with results. The pendulum has swung a little too far in the direction of divorce between medicine and surgery. There is work enough for each in his respective field, and it will be to the interests of humanity that they work rather toward than away from each other. Calm judgment, patience and discretion should go hand in hand with the most active research. Only by combination may the latter be made of its greatest possible avail.—*Buffalo Med. Journal.*

Progress of Medical Science.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Varicocele at St. Thomas' Hospital.

A careful enquiry has been made by Corner and Nitch into the subsequent history of 100 patients operated upon for varicocele at St. Thomas' Hospital. The results of their investigations are published in the *British Medical Journal* of Jan. 27th, under the caption, "The immediate and remote results of the high operation for varicocele."

The usual incision and removal of two inches of the pampiniform plexus, with approximation of the stumps by suture, was performed in all cases.

They mention hemorrhage, orchitis, edema and thickening of the scrotum, enlargement of the testis, hydrocele and suppuration as sequelæ of the operation.

With our modern methods of hemostasis bleeding does not often occur. Faulty knots and defective ligatures must be avoided. Two cases are cited where, after operation, the pelvis became filled with blood, no doubt due to a rupture of the peritoneum by the pressure of the effused blood outside this membrane in the inguinal canal. The method of bringing the two stumps of the excised veins in apposition by tying the proximal and distal ligatures together is condemned, on account of the danger of one of them slipping and hemorrhage resulting. It is better to suture the two stumps together with catgut.

Passive hyperemia may follow the removal of so many different channels and result in acute or subacute orchitis (56 per cent.), leading to further complications, edema and thickening of the scrotum, enlargement of the testicle and hydrocele. Suppuration occurs very infrequently and, of course, is always due to faulty technique.

Changes in the testis, epididymus and scrotum are taken up under the remote effects of the operation, also hydrocele, hernia and recurrence.

In 100 cases they found the testicle sclerosed in 90, enlarged in 55, testes equal 15, smaller 21. The scrotum was thickened in one-half the cases, hydrocele was found 23 times, spermatocele, hernia and recurrence, 2 cases each. Sensibility of the organ was unaltered in 84, increased in 9, decreased in 5, and lost in 2.

Seventy patients expressed themselves pleased with the result, unaltered in 26 cases, and 4 patients had more trouble.

The authors condemn the practice of removing too large an amount of the pampiniform plexus and attribute the high percentage of complications to such a procedure. C. B. S.

Primary Tuberculosis of the Kidney.

Hurry Fenwick, F.R.C.S., in a post-graduate demonstration at London Hospital, in October last, pointed out that a diagnosis of primary tuberculosis of the kidney in women was comparatively easy, provided the patient had the usual symptoms, such as renal pain, a renal tumor, an evening rise of temperature, tubercle bacilli in the urine. He claims that in some cases latent disease may be detected when even no symptoms exist to lead to a diagnosis of tuberculosis in one or other kidney. He bases the diagnosis on certain characteristic changes about the ureteric orifices in the bladder.

With the vast amount of clinical material at his disposal and his wide experience in tuberculous lesions of the kidneys, Mr. Fenwick, in certain cases, from a cystoscopic examination of the ureteric orifices, asserts that he can even foretell the exact pathological changes that exist in the kidneys. When he is certain of his data, he even goes so far as to make a sketch, before operation, of the changes likely to be found in the affected kidney, and then demonstrates the correctness of his views at the time of operation. Several beautifully colored illustrations appear in the *British Medical Journal* of Jan. 27th, giving a pre-operative delineation of a tuberculous kidney based on cystoscopic findings.

Mr. Fenwick states that a " dragged out, retracted " ureteric orifice is a very important feature in one class of tuberculous kidney. He asserts that when this condition is well marked, it can be absolutely relied upon as indicating tuberculous infection of the corresponding kidney. He has observed that a retracted, displaced, ureteric orifice points to a thickened, shortened ureter, with narrowing of its calibre and back pressure of urine on an unyielding thick pelvis. The strain is mainly borne by the upper and lower calyces, consequently the tuberculous changes are found mainly in these traumatized areas, with tuberculous deposits radiating from these primary foci to the cortex, where strong capsular adhesions are usually to be found. Mr. Fenwick believes that a thickened, leadpencil-sized ureter, associated with a red, " retracted," ureteric orifice, is characteristic of a certain type of renal tuberculosis.

C. B. S.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN

Submucous Resection of the Deflected Septum.

This method of treatment of severe cases of deviated septum has been so widely adopted by rhinologists during recent years, and so much has been written upon the subject, that its consideration in a general medical journal is worthy of the closest attention.

While it is talked and written about as something almost entirely new, Scanes Spicer, one of the leading laryngologists of London (*Jour. of Lar.,* June, 1904), claims that submucous resection of the cartilaginous septum is of comparatively ancient date. Chassaignac resected the septum submucously in 1851. Several years later Hartman and Peterson also performed the operation. MacKenzie, McBride, MacDonald, and Ball all mentioned it in their text-books, and in 1888, Greville MacDonald, at the Glasgow meeting of the British Medical Association, described this method of treating septal deviation as the "New Operation." This is eighteen years ago, and from then until now both MacDonald and Scanes Spicer have performed the operation when required. The latter, however, was chary about cutting away much from the antero-superior border or the tip of the septal cartilage. He mentioned this from the fact that while a patient shown at the time by St. Clair Thomson had his breathing powers much improved by the operation, and was well satisfied with the result, yet there was some sinking of the tip of the nose and a widening of the columella at the base.

In the same number of the *Journal of Laryngology,* a report of St. Clair Thomson's case, done by his own special method, is given. In it a large septal deviation was excised with complete preservation of the mucous membrane on both sides.

The operation was performed thus: An incision was made through the perichondrium on the convex side, and the membrane deflected back as far as required. The cartilage was then divided through to its under surface, deepening the original first cut, care being taken not to cut through the mucous membrane. The muco-perichondrium on this side was likewise dissected back as far as required with equal care, after which the whole of the deviated septum was excised. The under surfaces of the two muco-perichondria were then placed in apposition. The healing was rapid and the two

mucous surfaces with their ciliated epithelium being preserved, atrophy could not occur.

St. Clair Thomson's precautions to avoid buttonholing were simply patience and perseverance during the operation. Two points were essential: First, to be particular not to puncture the mucous membrane while cutting through the cartilage; second, to avoid puncturing while dissecting off the mucous membrane from the concave side. The time required for the operation was two hours, during which period the patient was under the anesthetic.

In his second case he buttonholed the mucosa on the concave side, owing to an inflammatory adhesion of the perichondrium to the cartilage. This was remedied, however, by contact with the opposite mucosa, the perforation eventually being entirely healed. The healed mucous membrane, or new fleshy septum, while hanging in the median line, will for a while quaver during inspiration of air.

In the *Laryngoscope,* June, 1905, W. L. Ballenger describes a new technique for the operation. This consists chiefly in the use of a new *swivel septum knife* for the removal of the cartilage, after dissecting back the two folds of the muco-perichondrium. In the old way, it was necessary to take away the deflected cartilage piece by piece, and sometimes the anterior portion of the vomer by means of cutting forceps or knives contrived for the purpose. This was a long and tedious process. His new method, by using the swivel knife, makes the operation easier, shorter and more perfect.

In performing the operation, Ballenger, with a special knife, makes a curved incision in the septal mucosa of the left side, regardless of whether this side is concave or convex. This incision is about an inch in length, beginning near the floor of the nose and curving forwards and upwards about one-fourth of an inch posterior to the anterior end of the cartilage. He next uses Hajek's semi-sharp elevator to separate the anterior end of the muco-perichondrium, following this by Hajek's blunt elevator to complete the balance of the operation of the muco-perichondrium on that side. Next, the anterior end of the cartilage is separated from the mucous membrane of the right side, carefully avoiding perforation—the same two instruments being used in dissecting back the muco-perichondrium of this side as the other, and the work being done with equal or even greater care.

The dissected folds being now elevated and separated from the cartilage, the latter is cut out by means of the swivel knife

in a single piece, the prongs of it being inserted on each side of the cartilage, thus protecting the mucous membrane from injury. Almost the only part of the cartilage left is the anterior tip which is retained to support the tip of the nose. The entire curvature is thus removed in a single triangular piece, the apex being the posterior end.

Sydney Yankauer, in the *Amer. Jour. of Surgery,* June, 1905, while advocating submucous section as the one operation to be commended, when properly performed, opens his article by some rather adverse criticism. He says that in many instances submucous resection of the deviated nasal septum has resulted in permanent perforation. Kreig, the supposed originator of the operation, had twelve per cent. of perforations. Freer, whose admirable articles on the subject and complete set of instruments for the operation, have attracted wide attention, had six perforations out of his first fifteen operations, being forty per cent. Another operator, in describing his cases at a meeting of the New York Academy of Medicine, stated that twenty per cent. of his operations were followed by permanent perforations; but that he did not consider perforation of the septum at all harmful. A wag among his confreres blandly asked: "Why subsect at all if a clean hole punched through the septum is all that is needed?"

Notwithstanding the recitation of these facts, Yankauer is a strong supporter of the operation, particularly when done with due care by a method devised by himself. He claims that immunity from perforation can be accomplished; and also states that Freer's subsequent resections were rarely followed by perforations.

Besides those already named, many new instruments have been added to those employed in this operation. Killean's new knife for the separation of the muco-perichondrium from the cartilage is warmly advocated by London operators.

Joseph C. Beck, in the *Laryngoscope,* Jan., 1906, has quite a list that he brings to the fore. He has a new hypodermic needle, specially suited for nasal work; a self-retaining operative nasal speculum, adapted for dilating both nostrils simultaneously; a combined dilator and clamp, to be used one blade in each nostril, to press the two mucosa flaps together after the cartilage has been removed. This allows ample space for packing, without disturbing the newly-placed tissues. After the packing is finished the clamp is removed.

John McCoy, also in the *Laryngoscope,* Jan., 1906, intro-

duces some new instruments. His knife is claimed to be a particularly safe instrument for making the incision through the cartilage. His straight forceps is an equally good one for removing both the cartilaginous and the bony septum. His curved forceps is shown also for cutting away the submaxillary ridge when included in the deviation.

While giving a faithful synopsis of the work that has so recently been done, and well done, in this much-vexed field of septal deviation, the abstracter would ask the question: Is it not possible for the pendulum to swing too far? Is the removal of the septal cartilage in all cases of severe deflection the one and only method by which adequate relief can be afforded? And in view of the conditions, is it not a dangerous method to be placed in the hands of every rhinologist just entering this important branch of medical science and art? If men like Freer, one of the most enlightened and accomplished of surgeons, made 6 perforations out of his first 15, no matter how successful he might have been afterwards; and other experienced rhinologists averaged 12 and 20 per cent. of perforations in all their cases, what would the inexperienced man do in his brilliant first efforts? Another question which is perhaps equally potent: Is it wise, even when a brilliant operation is performed, and the two folds of mucous membrane heal firmly back to back, to remove the entire cartilage in so many successive cases? This operation in its largeness has only been done during the last two or three years. What will be the effect upon these weakened septa during the long years of the future, for many of these patients will live twenty, thirty or even forty years yet? We know how weak an organ the septum is, for very frequently we find it perforated even without operation. And when perforated it always occasions more or less distress to the patient. The question may well be asked: Will there not be a very much larger percentage of perforations among the people during future years, if every rhinologist considers it his duty to do a submucous resection in every case of severe septal deformity? Is not conservative surgery the true note to ring in this as well as in other regions of the body, particularly when a true cartilaginous septum can be retained, and the nasal cavities freed from stenosis by other methods?

Editorials.

SMALLPOX AND VACCINATION.

We regret exceedingly that the Anti-Vaccination League of Toronto is increasing in numbers and apparently in influence. This League regards the recent decision of the Toronto School Board not to enforce in the future the rule requiring that each child shall be vaccinated before it enters the Public School as a substantial victory. Perhaps the most remarkable thing in connection with the meeting of the Board was the statement of one of the trustees, Mr. Parkinson, that when he was Principal of the Givens Street School, some 675 children were vaccinated within forty-eight hours; and of the 675 children thus vaccinated, six never came back to school and were ruined for life. Mr. Parkinson happens to be a reputable and intelligent man, and commands the respect of the public to a very considerable extent. He is considered by the majority of our citizens to be well qualified for a position on our School Board. Such a remarkable statement coming from Mr. Parkinson is likely to do incalculable harm. It is quite unnecessary to discuss the question in detail. If anything has been proved as to what might be called mathematical correctness in connection with the medical science, it is the fact that vaccination prevents that most loathsome and highly contagious disease, Smallpox.

We also know that vaccination done in a cleanly way is about the safest kind of a needle scratch to which anyone can be subjected. The almost infinitesimal danger connected with this slight operation is as nothing when compared to the inestimable benefits which accrue from it.

Professor Macallum gives us some interesting statistics in a letter to the lay press of Toronto. In the city of Gloucester, Eng., the law as to vaccination was not enforced before 1897, and in 1896, during the epidemic of Smallpox there developed 1,799 cases, including 1,000 who were children under the age of 14. The Officer of the Imperial Government, who investigated the conditions of the outbreak, expressed the positive opinion

that Gloucester would not have suffered as it did had its child population been vaccinated.

There is a small minority of the public so constituted as to be simply beyond reason. Argument with such persons is useless. Under such circumstances we are inclined to accept the opinion of Dr. Sheard, Toronto's able Medical Health Officer. He thinks that the public have been so long protected that some people begin to question the need of protection. He says there will have to be something done to enforce thorough vaccination. In this province the Ontario Government will have to see to this, prejudice or no prejudice. The counties where Smallpox has been growing, due to lack of vaccination, find that the disease is killing their industries and trade. It has cost them thousands upon thousands of dollars in lost trade in the last two years. He also adds that there has not been a year for a long time when Smallpox has done so much damage as it did in 1905 and the first two months of 1906.

ADULTERATION OF FOODS.

One of the greatest evils of the present day is the adulteration of foods. This evil has been well known and thoroughly appreciated by a large portion of the community for many years. Many battles have been waged between the advocates for pure food and the manufacturers of food substitutes in the United States during recent years. We understand that what is called the Pure Food Bill has been passed by the United States Senate. The New York *Evening Mail* thinks the people are to be congratulated on obtaining at last a national enactment which will begin a health-saving and life-saving work which will be little less than revolutionary.

The New York *Tribune,* however, is not enthusiastic about the passage of the bill by the almost unanimous vote of 63 to 4, as it considers that such a vote really betrays the insincerity of those who have long opposed the passage of such a measure. It adds, that for 15 years legislation dealing with the abuses of food adulteration and fraudulent branding has been side-

tracked session after session. It refers to the special pleas which have been made on behalf of the manufacturers of food substitutes. It was contended that the adulterated foods manufactured were as wholesome as the unadulterated products they replaced. It was also stated that a groundless prejudice against foods in any use would be created if manufacturers were compelled to disclose their formulas.

Some of the provisions of the new Bill are practically as follows: It will be a misdemeanor to manufacture or sell adulterated or misbranded foods, drugs, medicines, or liquors in any part of the United States, or to ship such goods to a foreign country. The punishment decreed is a fine of $500, or imprisonment for one year, or both.

CARNEGIE INSTITUTION AT WASHINGTON.

Considerable interest has been taken in the work of the Carnegie Institution established in Washington. Professor R. S. Woodward, formerly of Columbia University, is the President, and his recent Annual Report has been much discussed in the United States. The President, in this report, tells us much that is interesting about the policy and plans of the institution. It is essentially an organization for conducting scientific investigation. Prof. Woodward calls it a university without students, because it does the research work of a great university without the ordinary college work of teaching and examination.

The work which is now being done is divided under four heads: (1) Large projects requiring years of work from a corps of investigators, about ten of such being under way. (2) Small projects by individuals for short periods, there being about three hundred. (3) Tentative investigations encouraged in the hope of improving talent. (4) The publication of meritorious works that would not otherwise be printed, of which forty volumes have been already issued.

Prof. Woodward is anxious that close relations be maintained by this institution with other universities, especially re-

search centres. He also recognizes the increased eagerness of the public to learn the result of scientific research and desires some sort of co-operation between the institution and the existing media for the dissemination of information, that is, he wants to be in close relationship with the press of the country.

Among the greater projects now under way are investigations of fundamental problems in animal and plant biology, horticultural experiments, the steady stimulation of historic research, investigations regarding nutrition, such as the well-known work of Prof. Chittenden, of Yale, the Solar Observatory, etc.

The President thinks that more good is likely to result from these large projects than from the many minor investigations which are being carried on.

NOTES.

Model Hospital.

The City of Charlottenburg has decided to erect a small model lying-in and infants' institution, in honor of the Silver Wedding of the German Emperor and Empress, with the object of carrying out one of the favorite ideas of the Empress. There are to be thirty beds for women expecting confinement, who are to be allowed to remain in the institution until their children are three months old, and thirty beds for infants to be fed artificially. The mothers, during the time of their stay, will learn how to arrange their diet and mode of life so as to have a supply of wholesome milk for their babies, and how best to treat their children as they grow up. In the department for artificial feeding the most scrupulous attention will be given to periodical examination of cows and dairy, to the cooling and sterilization of milk, vessels, etc., so that in time a basis may be formed for the establishment of fixed rules to regulate the rational feeding of infants.

Toronto General Hospital.

The members of the Extern Staff of Physicians and Surgeons at the Toronto General Hospital, Doctors Murray, Stewart, Turner, Gilchrist and Wells, placed their resignations

in the Superintendent's hands on Feb. 28th. They contended that when they received their appointments it was understood that daily luncheons would be provided for them at the hospital. When the Superintendent of the Hospital, representing the Board of Trustees, told the members of the Extern Staff that the hospital could not provide the luncheons any longer the Doctors immediately resigned.

We are pleased to be able to state that the difficulty between the Extern Staff and the Trustees has been satisfactorily arranged and the Doctors have withdrawn their resignations and returned to their work.

The Extern Staff will be increased in numbers and the hours of their services have been arranged so that they will only be required to spend the half of each day in the hospital.

Ontario Medical Association.

The President again desires to call the attention of members of the Ontario Medical Association to the annual meeting for 1906. As was announced some time ago, the meeting will be called at 8 p.m., Monday, August the 20th, the evening preceding the inauguration of the British Medical Association's meeting, and will take the form of a purely business session.

The prestige of the greater meeting to follow should not diminish the sense of responsibility of the members to their local society. Such important matters as the closing of the business of this year and the intelligent preparation for a successful meeting in 1907 demands a wide and sympathetic interest in the welfare of the Association.

International Medical Congress.

It is now expected by physicians and surgeons on both sides of the Atlantic that the Fifteenth International Medical Congress, to be held in Lisbon, April 19th to 26th inclusive, will be a much greater success than was formerly anticipated. It is said that very elaborate preparations have been made for the meeting by the profession of Lisbon and Portugal.

A large number from Great Britain, France, Germany, Austria, Russia, Spain and Italy have reported that they will

attend and take part in the congress. Among those who will go from Canada are Doctors William Oldright, A. McPhedran and W. H. B. Aikins, of Toronto.

We understand that more than fifty physicians of the United States have decided to attend, among whom are: Dr. Senn, of Chicago; Dr. McMurtry, of Louisville, and Dr. Vanderveer, of Albany; Doctors L. S. Seaman, Gaylord, Gorgeas, Jno. B. Murphy, Hasbrouck, J. C. Wives, Carl Bronnell, Walter Chase, McCaskey, Turck, A. E. Macdonald, C. H. Hughes, G. B. Montgomery, A. D. Davis, H. C. Alexander, C. W. Allen, Emmett Holt, A. C. Victor, H. Gradle, J. Cannaday, C. W. Fassett, Raymon Guiteras and Mr. Clark Bell.

MEDICAL ITEMS.

We are pleased to learn that Queen's College will confer the honorary degree of Doctor of Laws upon Dr. C. K. Clarke, Supt. of the Asylum for Insane, Toronto, at the Medical Convocation on April 12th. Before coming to Toronto Dr. Clarke was for fourteen years Professor of Mental Diseases in the Kingston Medical College.

We have much pleasure in publishing in this issue an abstract of Dr. Roswell Park's Oration on Surgery, for the Centennial Meeting of the Medical Society of the State of New York. What we have published is really an abstract of the abstract which appeared in the *Buffalo Medical Journal* of February. It unfortunately happened that Dr. Park was very ill at his home in Buffalo for a great part of January and a portion of February. His many friends in Canada will be pleased to learn that he is now convalescent.

The merits of a target recently invented by Col. Peters (Dr. George Peters, Toronto) were discussed at a meeting of the Ontario Rifle Association, March 5th. The target is an electrical arrangement self-registering, and indicates the scores as fast as the marksman can shoot. Lieut.-Col. Macdonald and Major Mercer, who had inspected the target, praised it very highly. The Association unanimously decided to appoint a committee to investigate, and requested Dr. Peters to instal one of his targets on the Association's range.

Personals.

Dr. Arthur B. Sutton (Tor. '04) will commence practice in Omemee in June.

Dr. F. A. Clarkson leaves for England this month to do special work in London.

Dr. Edmund E. King, of Toronto, will sail from New York for Liverpool, May 2nd.

Dr. Brefney O'Reilly, who is now on his way to Japan, expects to return to England next July.

Dr. A. F. Malloy (Tor. '04), of Exeter, was married to Miss Annie Townsend, of Toronto Junction, Nov. 29th, 1905.

Dr. Wm. Hackney (Trin. '97) has returned to Ottawa after spending some years in post-graduate work in London, England.

Dr. George Badgerow paid a flying visit to Toronto in March. After spending two weeks in Canada he sailed for England, March 19th.

Dr. A. McPhedran, of Toronto, sailed on the 31st of March to attend the International Congress, after which he will visit at Paris and London.

Dr. Charles O'Reilly returned to Toronto, March 25th. Before leaving London he attended the King's levee at Buckingham Palace, Feb. 26th, and was presented to His Majesty by Lord Strathcona.

Dr. W. H. B. Aikins left for Europe, March 27th. After attending the International Medical Congress at Lisbon, he will go to Vienna, by way of Madrid, and return to his home the latter part of June.

Dr. William Oldright, of Toronto, will sail for Gibraltar, April 3rd, accompanied by his wife and daughter. After attending the Congress in Lisbon, Portugal, they expect to make a tour of Spain and Italy.

Dr. J. Sing, of Belleville, met with a railway accident recently, receiving serious injuries to the head and left arm. A train ran into his vehicle as he was crossing the tracks. It is miraculous how the doctor escaped with his life.

Sir James Grant, of Ottawa, celebrated his golden wedding on January 22nd. Congratulatory addresses were presented by the St. Andrew's Society, the Protestant Hospital Committee, and the profession of Ottawa. Sir James was born in Inverness-shire in 1830, and came to Canada in early boyhood.

Obituary.

DR. MATTHEW WALLACE.

Dr. Mat. Wallace, of Toronto, died of cancer of the bowel, March 3rd, 1906, aged 57. He received his medical education in the Toronto School of Medicine, and graduated M.B. (Tor.) and M.D. (Vic.) in 1880. In writing his obituary notice we feel that we cannot do better than reproduce the following articles from the Toronto *Globe,* the first of which was published some months before Dr. Wallace's death:

The Blessed Physician.

The men who have had the opportunity of reading the post-mortem opinion of their neighbors are rare. We do not tell people the good we see in them while they still live and are able to feel that in the estimation of their contemporaries they have not lived in vain. We wait at the bedside of the true nobility of the earth, dumb and soundless, until assured that the angel of death has touched him, and then we break into eulogies that can reach his ear no longer.

Perhaps it is better so, for there are cases where eulogy would be a jarring note—where the pure unselfishness of good deeds might be sullied by the seeming reward. Perhaps least of all do we think of contemporary praise of the good physician, that greatest blessing that a community can have. Ian MacLaren has given us a picture of the good physician, in that Dr. Maclure, whose funeral on the wild winter's day was the memory of the glen, and happy are those who have had a Dr. Maclure come like a household benediction into their own lives.

Toronto may have more than one such blessed doctor, but one at least the east end of the city has known for many years. A man of strong athletic build could have been seen at any time during the past two decades threading its streets on bicycle or street car, making his way to humble homes, where his cheery, brother-like greetings were more medicinal than all the drugs of the pharmacopeia. The poorer and the more hopeless the home the more need, in this physician's estimation, of the rarest skill and watchful attention, so that one of the afflictions of poverty might at least be stayed or removed. And if there were two calls on his attention the cottage got his first ministrations. The patient in the well-to-do home would have no difficulty in getting another physician, while the same could

not be said of the little cabin where there was positively no hope of fees or other reward than the fervent "God bless you" of the sorrowing and stricken. That class of cases our Toronto Maclure conceived to be his special field. But, whether impoverished or otherwise, all were treated alike so far as fees were concerned. No bills went out to anybody. The doctor was too busy curing people to have time to be keeping tab on the number of places where he scattered sunshine and healing. If any felt that they owed the doctor anything and they had a little loose change that they had no other use for they could send it on—they knew his address. Thus he went about doing good, as if his profession was a consecrated one and available for all, like that of the priest. And with it all there was none of the affectation of goodness—no cant, no snivelling, but bluffness, heartiness, and jollity, with an occasional expletive that denoted kinship with ordinary sinners rather than with cloistered saints.

In the midst of these activities, which made twenty-four hours all too short for a day's calls, fate spoke. And its sentence was what is generally considered the most cruel that can be pronounced. The word cancer has such significance of slow and malignant corruption that the very naming of it freezes the blood. This was the word applied to the symptoms which for some time had made themselves apparent in his constitution, and for the first time in his life he who had sat like the genius of healing at a thousand bedsides was himself stricken beyond all hope of cure. No names are mentioned, because it is not good form to pour out the ointment of appreciation aforehand. And he had not worked for the reward of eulogies any more than for the reward of lucre.

A Canadian Maclure.

The death of Dr. Matthew Wallace, which occurred on Saturday, terminates a long and painful illness which has been watched with unaffected sorrow by an uncommonly large number of men and women who knew of the marvellously unselfish life which was thus being closed grievously and untimely. Two years ago Dr. Wallace would have been remarked for his vigorous physique, but cancer developed and the efforts of the surgeons after a long battle have proved unavailing. It can be said without exaggeration that Dr. Wallace was literally an angel for healing in all parts of East Toronto, or, indeed, wherever there was much suffering and little money. His

practice was almost wholly among patients who were subjected to the twin evils of poverty and disease. Homes where the two went hand-in-hand always knew that at the corner of George and Queen streets there was a physician who would hasten to their bedsides at any hour of the day or night to assuage their pains, and see, moreover, that they had food or medicine when the means for obtaining either were absent.

He had no high philosophy about it. He had no nicely balanced creed or ethical code in regard to the obligations of a physician. Indeed, the studious sociologist could have proved to a demonstration that many of his actions were calculated to encourage unthrift and thoughtless improvidence. He just followed the impulses of his big heart, which made it a pleasure for him to bustle into some lowly and perhaps ill-regulated home in his breezy, hearty way and leave a poor neglected old man or old woman or hectic child better and easier and more hopeful for his visit.

And then the mystery that this strong battler against disease, this cheerer of hearts, this lightener of burdens, in the best and most useful years of his manhood; he who had met death and worsted it at so many bedsides met it in the noontide of life at his own, and met it in its most terrible and most malignant aspect! Questionings in such a case are vain. We must wait until the meaning of it all is revealed. It can, at least, be felt that, in the most poignant hour, when thoughts of his loved ones, soon to be left fatherless, pressed upon him, his own unselfish life of serviceableness would have a sweet savor. He could leave his family no grander heritage than the memory of such a life. There have been thousands of statues erected to men that did less for their kind than Dr. Matthew Wallace.

DR. CHARLES EDWIN JAKEWAY.

Dr. Jakeway, of Stayner, died March 1st, his death being due to a very distressing accident. While getting some hay and straw for his horse at half-past ten at night his lantern exploded, igniting the hay and straw in the loft and smothering him in a short time. The body was quickly recovered, but efforts at resuscitation were unavailing. There was no injury to the body except that the hands were slightly burned.

Book Reviews.

Differential Diagnosis and Treatment of Disease. A text-book for practitioners and advanced students. By AUGUSTUS CAITLE, M.D., Fellow of the New York Academy of Medicine; Member and ex-President of the American Pediatric Society; Professor of Diseases of Children, New York Post-Graduate Medical School and Hospital; Visiting Physician to the New York Post-Graduate and German Hospitals; Consulting Physician to Isabella Home and Hospital, etc. With two hundred and twenty-eight illustrations in the text. New York and London: D. Appleton & Company. 1906.

This volume combines what has usually been called internal medicine with enough of the various specialties to enable a general practitioner to have at least a working knowledge of them. In other words it is a most suitable book for the family physician, the mainstay of our profession, who has been, during the last decade, slowly forced out of existence by the specialist. The reader can rely upon any new information given as being thoroughly up-to-date. To cover the ground at all well in 800 pages, means that every point must be stated concisely, a decided merit in the eyes of a busy man. The original illustrations are most excellent.

Diseases of Metabolism and of the Blood, Animal Parasites, Toxicology. Edited by RICHARD C. CABOT, M.D., Instructor in Clinical Medicine at the Medical School of Harvard University. New York: D. Appleton & Company, Publishers.

This is the second volume in a series entitled Modern Clinical Medicine, the first of which was Infectious Diseases, edited by J. C. Wilson, Professor of Medicine at the Jefferson Medical College, of Philadelphia.

This volume is equal to the one which preceded it, and is characterized by the same exhaustiveness of treatment. The translation and general editing has been carefully done by Dr. Julius L. Salinger, and the many annotations made throughout the work by Dr. Cabot are of special value. When we consider that the original work was written by such eminent clinicians as Gerhardt, Ewald, Ehrlich, Grawitz, Leube, Litten, v. Noorden, Naunyn, and Jaksch, little need be said as to the standard of the teaching herein presented. It bears the stamp of direct, simple, clinical teaching such as characterized the instruction of those above mentioned.

The work may be regarded as setting forth the most advanced teaching in medicine. It is an epitome of the latest researches in a field hitherto regarded as obscure and almost unexplored.

The work is unexcelled in any language and should have a place in the library of every physician. The busy practitioner both in medical centres and in remote hamlets may here find his inspiration and guide. One of the distinguishing features of the work, which renders it especially valuable to the practitioner, is the very full discussion of treatment, embracing full diet-lists as well as all the modern aids, such as organotherapy, medical gymnastics, massage, hydrotherapy and electro-therapeutics, without subordinating actual drug treatment. We predict for this book as favorable a reception as was given to Infectious Diseases.

The Signs of Internal Disease, with a Brief Consideration of the Principal Symptoms thereof. By PEARCE KINTZING, B.Sc., M.D., Professor of Physical Diagnosis and Diseases of the Heart, Maryland Medical College; Physician to the Franklin Square Hospital, Baltimore, Md. Illustrated. Cleveland Press, Chicago. 1906.

"The Signs of Internal Disease" is a book especially adapted for the student body, as a ready reference and aid to them in their hospital work. The author warns them of the small value of a book on physical signs unless used as a guide and impresses them with the absolute necessity of repeated examination.

It is the work of an orderly brain, and although there may be nothing startlingly new, yet one is struck by the consecutive thought shown in the arrangement of the sections; the book contains, besides the physical signs of disease, and the more prominent subjective symptoms, a résumé of the latest laboratory methods; the plates are numerous and graphic, many of them drawings, serving the better to convey ideas from mind to mind than the perfectly symmetrical plates we are accustomed to. It is a book we can highly recommend.

The Diseases of Infancy and Childhood. For the use of Students and Practitioners of Medicine By L. EMMETT HOLT, M.D., Sc.D., LL.D., Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York; Attending Physician to The Babies' and Foundling Hospitals, New York; Consulting Physician to The New York Infant Asylum, Lying-in Hospital, Orthopedic, and Hospital for the Ruptured and Crippled. With two hundred and forty-one illustrations, including eight colored plates. Third edition. Revised and enlarged. New York and London: D. Appleton & Company. 1906.

Frequent revisions of a text-book in pediatrics are necessary if it would adequately present to its readers existing knowledge in this department of medicine. The present revision has been made without any important changes in the general arrangement, and at the same time without materially increasing

the size of the volume. Certain chapters have been much abridged while others have been much expanded.

The needs of the student and practitioner rather than those of the specialist have been constantly kept in mind. The purpose has been to restrict the book to its own field—now so constantly widening—omitting the discussion of subjects which are fully treated in works upon pathology, general medicine and surgery.

Convinced of the great value of good pictures, both of clinical and pathological conditions, special pains have been taken in this revision with the illustrations. Many old ones have been replaced by better ones, and altogether twenty-five new illustrations have been introduced.

While alterations have been found necessary in almost every chapter, the principal changes have been made in the articles upon the following subjects: Examination of the Sick Child, Hypertrophic Stenosis of the Pylorus, Diarrheal Diseases and Dysentery, Vaginitis, Cerebro-Spinal Meningitis, Mental Defects, Chondro-Dystrophy, Status Lymphaticus and Diphtheria. Most of these chapters have been entirely rewritten; some appear for the first time in this edition. Holt on the Diseases of Infancy and Childhood is the standard of excellence.

Selections.

Heart Block and the Stokes-Adams Syndrome.

The cause of the heart beat, and the path which is taken by impulses passing from the auricles to the ventricles, has been a matter of controversy for years. The physiologists have practically always been divided into two camps regarding the matter, one group insisting that the transmission of the heart impulse takes place through the nervous system, the other that it occurs by means of muscular tissue. Until within two or three years the former group seemed to have a little the best of the argument, but the discovery by His, Jr., in 1903, that there existed a muscular band which connected the auricles with the ventricles put an entirely new face on the matter. This bundle, which is now quite generally spoken of as the bundle of His, is, in man, a narrow band 18 millimeters long, 2.5 millimeters wide, and 1.5 millimeters thick. The bundle runs posteriorly in the septum of the ventricles, from which it passes into the musculature of the right auricle and its valves.

The experimental demonstration that the bundle transmits the impulses from the auricles to the ventricles has been made by His, Humblet, and more recently by Erlinger, whose interesting experiments should be read by all students of heart disease. Without going into detail regarding the methods of experimentation, it may be stated that by varying degrees of compression of the bundle of His all stages of heart block, *i.e.*, interruption of the transmission of impulses from the auricles to the ventricles, may be obtained. Slight compression results merely in an increase in the intersystolic pause; more marked compression produces intermittency in the ventricular contractions, and complete compression causes the auricular and ventricular contractions to occur independently of one another. The experiments also showed that, while the accelerator cardiac nerves are not influenced by heart block, the vagi lose their control over the ventricles.

The bearing which these observations have on certain forms of heart disease, and especially on the so-called Stokes-Adams syndrome, can not be overestimated. It will be remembered that the cardinal symptoms of this condition are bradycardia, in which the auricles may be definitely shown to beat more rapidly than the ventricles, and apoplectiform or epileptiform attacks. As Erlanger states, all the cardinal symptoms of

Stokes-Adams disease may be explained by the effects of heart block. The relation of heart block to slow pulse and disparity of action between the auricles and ventricles has already been made clear in discussing the experimental work. The epileptiform attacks are explicable as the result of anemia of the brain, and are doubtless similar to those seen after hemorrhage in warm-blooded animals. The apoplectiform attacks are probably due to venous congestion of the brain, which has long been known to be associated with slow respiration, paralysis of the glottis, and spasmodic symptoms.

A glance at the autopsy protocols of the published reports of cases of Stokes-Adams disease shows at once that, so far, no one pathologic condition has been found as a cause. It is also apparent that in some cases lesions are described which could easily exert pressure on the bundle of His—tumors of the septum, for example. Naturally, up to the present time, there has not been an opportunity to examine this bundle in any large number of cases. We believe that a case of Stokes-Adams disease has recently been reported by Stengel, in which definite disease of the auriculo-ventricular bundle was present, and there is little doubt that similar reports will soon be forthcoming. Some points which have been developed in the treatment of this affection, on purely empirical grounds, are interestingly made clear by the experimental work, especially the disadvantage of digitalis in this affection, and the good results sometimes following the use of iodids. The latter may be partly explained on the ground that the disease of the bundle of His is sometimes syphilitic. Erlanger suggests that atropin, by steadying the pulse, will also be of value in this condition. —*J. A. M. A.* (Editorial).

Spermatic Insufficiency and Diastematic Insufficiency.

Ancel and Bouin explain that insufficiency of the testicles does not mean inadequate production of the seminal secretion alone. There is a seminal gland in the testicle and an interstitial gland. The seminal gland comprises the seminiferous tubules, while the intertubular connective tissue is what the authors call the interstitial gland or diastema. The latter is probably the seat of the production of the internal secretion of the testicles. Experiments on animals have shown that each gland is practically independent of the other and may fail in its task without compromising the functional activity of the other. There is, therefore, a "spermatic insufficiency" and a "diastematic insufficiency." The former is shown solely by

the absence of spermatozoa and is physiologic in the aged. The diastematic insufficiency is manifested in other and numerous ways. If the gland fails to work at all, the age of puberty does not bring virility and the individual grows into a natural eunuch. If the gland does not fail until after puberty, the manifestations are less marked, but the beard and hair are liable to drop out, the voice to become hoarse, the mammæ may develop and the outlines become more rounded generally. The individual may remain infantile or develop into a giant or present the characteristics of the female. These various types and transitions have been noted among pigs, and when slaughtered the testicles were found abnormal, as anticipated. Experiments on rabbits proved that it is possible to retard the development of puberty for six months by ligating the vas deferens. Diastematic insufficiency in boys as puberty approaches is evidenced by a rapid and exaggerated growth of the limbs, tardy appearance of the hairy system and of the development of the external genitals, marked muscular weakness, nervous exhaustion, asthenopia, etc. The noticeable action of the interstitial gland in the testicle on the development of the skeleton is responsible for the stimulation of the growth of the epiphyseal cartilage as the first manifestation of diastematic insufficiency, transient or permanent, appearing during the period of puberty. They add that such lads seem to be peculiarly predisposed to tuberculosis, possibly owing to lack of the "invigoration" from the internal secretion of the interstitial gland in the testicle.—*Press Medic. and J. A M. A.*

A New Treatment for Furuncles and Carbuncles.

The local treatment by electricity is advocated by Marcus (*Münchener medizinische Wochenschrift*). Previous to the appearance of suppuration, he opens the follicles of the affected area and introduces into them an epilation needle connected with the negative pole. Through this a current of one to two milliampères is passed at first, which is afterwards increased to ten. By slightly moving the needle around, the opening of the follicle is considerably enlarged, and a quantity of frothy serum is soon poured out, containing portions of tissue and numerous cocci. Then the needle is removed, the spot is carefully cleansed; the needle is again introduced and one or two milliampères are again allowed to pass. The positive pole is now to be connected with the needle, and the current again raised to ten milliampères. This causes the liberation of acid, which is always more energetic in its nascent condition. In

two or three minutes the treatment is suspended and the surface again washed with water. Each affected follicle is treated in the same manner. If suppuration has already commenced, a larger needle is introduced into the follicles and moved around, until the entire greenish yellow pus plug is broken up and disappears in foam. Then the positive pole is introduced and again followed by the negative pole. A wet dressing is applied. This treatment is not applicable to very large carbuncles or extensive swelling.—*N. Y. Med. Jour.*

Physiology of Reproduction.

A very valuable contribution to the physiology of mammalian reproduction has appeared during the past year in a paper read before the Royal Society by Mr. Marshall and Mr. Jolly. From their observations they conclude that the changes in the uterus which determine menstruation are due not to ovulation but to the action of the internal secretion of the ovary. They further suggest that the interstitial cells of the ovary may be the source of this internal secretion or hormone, as such secretions are termed by Dr. E. H. Starling, and, as the latter points out, definite evidence has been brought forward in a recent research by Miss Lane-Claypone that the interstitial cells in the testis are derived from the germinal epithelium, and that these cells are equipotential with those forming the ova and the Graafian follicles in the ovary. The observations of Fraenkel on the function of the corpus luteum are in part confirmed by Mr. Marshall and Mr. Jolly, who believe that the internal secretion of the ovary, elaborated either by the follicular cells or the interstitial cells of the stroma circulating in the blood, induces menstruation and "heat." In animals which have been deprived of their ovaries, and in which the phenomena of "heat" are therefore absent, these phenomena can be reinduced by the injection of ovarian extracts. After ovulation the corpus luteum is formed, and this organ provides a further secretion, the function of which is essential for the changes taking place during the attachment and development of the embryo in the first stages of pregnancy. In his Croonian lectures Dr. Starling describes a series of experiments carried out by him with the object of discovering the relation between the growth of the fetus *in utero* and the growth and activity of the mammary glands. As he points out, there are so many facts which militate against the old view that the growth of the mammary glands in pregnancy is determined reflexly through the ner-

vous system, that physiologists are ready to believe that the nexus between the mammary glands and the generative glands is of a chemical nature. It is evident that this chemical stimulus may originate from any one of four sources—the uterus, the placenta, the ovary, or the fetus. As the result of a series of very elaborate experiments on rabbits, too lengthy to be detailed here, Dr. Starling comes to the conclusion that the growth of the mammary glands during pregnancy is due to the assimilatory or inhibitory effects of a specific chemical stimulus produced in the body of the fetus and carried hence through the placenta by the fetal and maternal circulation. The removal of this inhibitory stimulus at the end of pregnancy determines the spontaneous break-down of the built-up tissues, *i.e.*, activity, which in the cells of the mammary gland is expressed in the formation of milk.—*The Lancet.*

Enteroptosis.

Mathes remarks that the large number of women with enteroptosis observed at the gynecologic clinic at Graz, where he is assistant, early attracted his attention, and he has made a special study of this condition. His conclusions may be summarized in the statement that enteroptosis is a constitutional and hereditary anomaly of the entire organism, a lack of vital energy in all the body tissues, although it derives its name from the most striking manifestation, the sliding down of the bowels. The abdominal organs slide downward on account of the insufficiency of the frequently hypoplastic, sunken-in thorax and the relaxation of the abdominal walls. The organs in the lower abdomen thus become supported only by their ligaments and the abdominal walls. The condition is readily recognized from the general aspect of the body. The spine is bent over and the longitudinal axis of the thorax forms an obtuse angle with the similar axis of the abdomen. The expression of the face is juvenile. In short, the habitus enteroptoticus is identical with what we call the habitus phthisicus. The clinical importance of the anomaly depends on the degree in which the nervous system is involved. The greater the congenital anomaly, the earlier the results become manifest. This is especially the case in the infantile form characterized by hypoplasia of the thorax and the infantile general aspect. The chlorosis of such girls is a "crisis" of enteroptosis. The latent predisposition is fanned into an actual malady by some special stress, some genital or other affection, an exhausting disease, pregnancy, tight lacing, overstrain, lack of proper

nourishment or similar drag on the vitality. The symptom-complex of retroflexion of the uterus is identical with that of wandering kidney and enteroptosis. The peritoneum of women with this displacement of the bowels is exceptionally sensitive, and this sensitiveness is increased by any genital affection. The effect on the general nervous system has nothing to do with hysteria and neurasthenia. Enteroptosis is undoubtedly on the increase, but the paintings of the old masters show that it has always existed. Memling's "Eve," in the Vienna gallery, is a typical example, and also some of Botticelli's women, while the number of modern painters who admire the enteroptosic type, he states, is considerable, especially the pre-Raphaelites. Treatment must consist in general strengthening measures. In severe cases strict bed rest and Weir Mitchell forced feeding may be ordered. Gymnastic exercises to strengthen the muscles of the thorax and of the abdominal walls correspond to causal indications. A well-fitting abdominal bandage below the umbilicus, supported on the pelvic girdle, will put an end to a number of the disturbances. Weight from the shoulders should be avoided. In conclusion Mathes declares that the local treatment of gynecologic affections should be restricted to the minimum and to those cases alone in which it responds to the causal indications. Prophylaxis is important to recognize and to compensate the constitutional effect and to keep all exciting causes away from those predisposed to this condition.—*Arch. of Gyn. and J. A. M. A.*

We learn that a somewhat serious epidemic of typhoid fever has existed in certain outlying districts of Montreal for the past two or three months. There seems to be some mystery regarding the cause of the outbreak. It seems that the Health authorities have not as yet given any accurate information on the subject, and prefer not to do so until they are sure of their ground.

We are told by *American Medicine* that the system of free distribution of diphtheria antitoxine throughout the State of New York has been enforced for a few months with the result that the disease has been reduced about 80 per cent. This means that instead of claiming 420 lives out of over 1,000 children afflicted with the disease, diphtheria gets only 88 victims out of 1,000.

The Treatment of Follicular Tonsillitis.

A. Sbrocchi (*Clinique Moderne*), after describing the symptoms and course of follicular tonsillitis, considers in great detail the numerous forms of treatment hitherto in general use. He believes that all of them completely fail both in limiting the extension of the disease and in diminishing the sufferings of the patient. Any improvement which follows their use he ascribes to the natural, though not invariable, tendency of the disease to spontaneous cure. As an alternative he proposes a remedy which has been occasionally mentioned by other writers, but hardly ever with the complete confidence to which its superiority to all other forms of treatment entitles it. This treatment consists of the systematic painting of the tonsil with a 1-in-1,000 solution of perchloride of mercury. At each sitting each tonsil should three times be painted in turn all over with the solution on a cotton-wool sponge fastened to the end of a penholder. At the first sitting a patient and gentle attempt should be made to remove all secretion from the tonsil both in front and behind, but without wounding the mucous membrane. The soft palate and uvula should also be touched with the solution. The sittings should be repeated at intervals of three or four hours. If the treatment has been thoroughly carried out, with the help of good illumination, depression of the tongue, and appropriate phonation to enable the whole surface to be reached, even a single painting will be followed in the course of a few hours by a decided fall of temperature and a great improvement in the patient's condition, and the morbid process will come to an end after three or four paintings at the outside. No other treatment, internal or external, is necessary or desirable. Where four paintings fail to effect a cure, Sbrocchi considers the fact proof of a diphtheric infection, and proceeds at once to the injection of antidiphtheric serum. His corrosive sublimate treatment is entirely ineffectual as against diphtheria, both the more usual form of diphtheria and also that which sometimes stimulates a follicular tonsillitis.—*British Medical Journal.*

Results with Antithyroidin Exophthalmic Goiter.

In the past year the value of Moebius' antithyroidin in exophthalmic goiter has received widespread confirmation, observes Walter Baumgarten, of St. Louis. It has shown itself by far the most successful attempt yet made to produce a serum to combat thyroid intoxication. It is obtained from the

blood of sheep drawn six weeks after extirpation of the thyroid. Injected subcutaneously it proved to be entirely without value, and frequently resulted in abscess formation at the point of injection. Given by mouth, however, it has been followed by very encouraging results. Nine cases have been reported in the past year by Thienger, Hempel, Peters, Lorner, and Duerig. In one case no improvement occurred. In the remainder there was a reduction of the pulse rate, and an improvement in the general circulation, in the size of the thyroid and its consistency, and improvement in the tremor, in strength, and in the subjective feeling of well-being. In some cases this improvement continued only during the administration of the serum or for a short time afterwards. Duerig, however, reports a case in which improvement was maintained for six months, after an administration of the serum for a period of four months preceding.

Christens has used with equally favorable experience the dried, pulverized blood of thyroidectomized sheep, instead of the serum, administering it by mouth as in the case of Moebius' antithyroidin. It must be recognized that antithyroidin and the dried blood as used by Christens are purely symptomatic remedies, and that as far as experience has shown they give only temporary results. Even though temporary, these results have, however, justified its use. Aside from occasional nausea and feeling of aversion, it produces no untoward results except when grave circulatory disturbances have made their appearance, especially myocarditis, when it undoubtedly adds to the gravity of the case and is strongly contraindicated.

Eulenberg reports seven cases treated with Moebius' antithyroidin, in five of which the general condition, at least, was greatly improved. He considers the serum a distinctly helpful palliative measure, but he does not feel justified in letting it replace the dietetic and physical methods of treatment, which should be carefully adhered to.—*Interstate Med. Jour.*, Jan., 1906.

Intraocular Hemorrhage Treated with Dionin.

Dionin is gaining wider and wider recognition as an extremely valuable agent in a large number of external and internal diseases of the eye, says John Green, Jr. In subconjunctival injection it was found by Blanco (*Arch. de Ophthalmol.*) to cause resorption of a severe intraocular hemorrhage, with restoration of vision to normal.—*Interstate Med. Jour.*, Jan., 1906.

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THE ORIGIN OF HUMAN MIND.

BY JAMES BAUGH, M.D., HAMILTON.

Intelligence, or as the word signifies, the faculty of choosing or selecting, is peculiar to all forms of cell life. This cell-intelligence is not automatism, but distinctly thoughtful, purposive and methodical. In a word it is that in which we first discover mind *in embryo*. Molecular motion does not produce the cell-intelligence, but intelligence produces molecular motion, cell proliferation and cell differentiation. As matter and energy would seem to be always associated, the former being transformable into the latter, so life and intelligence must, in some degree, be ever associated in the production of all phenomena in the animal and vegetable world. We do not know yet how to produce a living body spontaneously from dead or inorganic matter, but when the most infinitesimal particle of matter has once been made alive, the life within it has the power and intelligence not only to reproduce itself, but to so modify the individuality of its progeny that some specific organism may be evolved. Let one such specific elementary body be known as an ovum, and another as a spermatozoon, both of them multicellular in structure and highly organized. The cell-intelligence, essential to their individual being and existence, seeks to bring them together, and to blend their lives and substance to form a new body more distinctly specific and immeasurably more complex in its organization than those bodies from which it sprang. The life and intelligence of the spermatozoon become associated

and blended with the life and intelligence of the ovum, and from the union of these two cell-intelligences or embryonic minds the individual human mind springs, unfolds and expands. The two cell-intelligences incarnated in one body generate and evolve an organism which becomes, as it assumes more perfect form, more and more susceptible to its subjective or maternal environment. The mental, nervous and other physical conditions of the female on whom the fetal body subsists *in utero,* and on whom it depends for the pabulum necessary to the growth and development of its mental and nervous system, as well as its various tissues and visceral structures, influence the evolutionary process of the mind. These ante-natal or atavistic impressions undoubtedly exert a continuously modifying influence in the development of mind until it comes in contact with the post-natal objective environment, and then the embryonic mind, evolved from cell-intelligence, becomes conscious of its being and begins to unfold and expand and play its part. This part may be either passive or active. It may yield and conform to the conditions of natural and social environment in which it finds itself, or it may seek to change those conditions. So far the subject has been dealt with only as it can be experimentally demonstrated.

We now enter the regions of metaphysics and assume that life is an immanent, transcendent and continuous force possessing intelligence, or mind, which fills all space and will fill all time. The intelligence, then, from which the human mind is derived and which constitutes man's individuality, is infinite and eternal; and as man's mind is but an infinitesimal part of the infinite mind or intelligence, it must be indissolubly and inseparably associated with the infinite. The human mind is but one, though perhaps the chief phenomenon of the infinite intelligence. The beauty and fragrance of a flower; the acrid and poisonous not less than the luscious and nectarous fruit; the blade of grass; the ear of corn; the sturdy oak and the stately pine are only in a degree less phenomenal than man and other animals. Without attempting to discuss the subject ontologically, I submit that the being, life and intelligence of all these phenomena depend on the presence of a ubiquitous intelligent life which fills all forms of life. The infinite mind manifests itself in the human mind, and the human mind only becomes conscious of its being after a varying period spent in an objective environment. It does not enjoy perfect or absolute

freedom. It may roam or fly in its own subjective realm—imagination—withersoever it would, but in the external, or objective, world its operations must meet with many obstructions, restraints and limitations. It must strive strenuously if it would dominate or sink into mediocrity, insignificance and obscurity. As a social unit in corporal form it is responsible to organized society as represented by the state. As a part of the infinite and eternal, it is in essence immortal; but whether its individuality will persist after dissolution or be lost in the infinite ocean of intelligence, I will not now venture an opinion.

When the chemico-physicist shall have succeeded in producing life spontaneously, let us hope his product will be not less intelligent and beneficient than natural life, whose methods and operations may sometimes seem imperfect and fallible because of the non-development by humanity of the mental powers with which it has been so richly endowed. This non-development, however, may be purposive and according to design—a world filled with intellectual giants and geniuses might be as disastrous to mankind as the deluge.

THE DIAGNOSIS OF THE POSITION AND PRESENTATION OF THE FETUS IN UTERO, WITH A SPECIAL REFERENCE TO ABDOMINAL PALPATION.*

By R. G. SNYDER, M.B. (Tor.).

Mr. President and Gentlemen,—The subject for discussion to-night ranks second in importance only to obstetrical asepsis, in the list of recent important advances made in practical midwifery. When the day comes that every obstetrician makes a thorough and correct diagnosis of his cases before the onset of labor, then and only will the term "still-born" be seen less frequently upon our death certificates, and the field of the gynecological surgeon become more limited.

Although an obstetrician requires the aid of more than one method of examination before venturing an opinion upon the position of a child *in utero,* it is the object of this paper to bring more forcibly before your minds the very great importance of every practitioner striving to become more and more proficient in abdominal palpation. It is remarkable that although the value of abdominal palpation has been recognized for nearly one hundred years, it is only quite recently that obstetrical writers have insisted upon necessity for its practice, even although many writers since the observation of Semmelweise have noticed the close connection between repeated vaginal examinations and the occurrence of septic infection.

Ninety-four years ago Wigand drew the attention of the profession for the first time to this method of examination, and twenty years later, Schmidt and Hohl published very complete papers upon the subject. In spite of these writings, however, abdominal palpation was not generally recognized to be of value until the last quarter of the nineteenth century, when Crede and Leopold in Germany, Pinard in France, and Macan, Neville and Smyly in Dublin, drew the attention of obstetricians to its immense practical importance.

I think we owe no small amount of credit to the surgeons, who in their field have clearly demonstrated that no man can afford to make light of aseptic and antiseptic precautions, and still hope to get perfect results. At first there was a great controversy about disinfecting a surgeon's hands, then

* Read at meeting of the Post-Graduate Society, Toronto.

followed another as to the advisability of wearing rubber gloves, but to-day it is a rare sight to see a surgeon start an operation in Toronto hospitals without doing both these things. On their side, the obstetricians have not been slow in following these discussions, and in adopting the disinfecting of their hands, the careful preparation of the patient, and even the wearing of gloves, especially where they have been exposed to infection from pus organisms. Yet we should go one step further, as we can greatly reduce the liability to infection by depending almost entirely upon abdominal examinations instead of vaginal for diagnostic purposes. To show that recent writers are beginning to appreciate the importance of this method of examination, I quote the following from Dr. Whitridge Williams' latest book on obstetrics: "Under ordinary circumstances external or abdominal palpation is the most reliable and valuable, *and I should unhesitatingly choose it were I restricted to one single method of examination.* In trained hands it enables one to make a satisfactory diagnosis *without danger of infection,* and with the least possible discomfort to the patient, *and it is not going too far to say that its popularization forms one of the greatest advances in modern obstetrics.*"

Before starting our examinations we should have some idea as to the relative frequency of the different presentations. According to Shroeber's statistics, based upon several thousand cases for all periods of pregnancy, vertex presentations occur in 95, breech in 3.11, transverse in .56 and face in .6 per cent. We can see from this that we must always bear in mind the great preponderance of normal presentations before giving a final opinion as to the nature of the labor, but although we are comparatively safe at any confinement, in assuring the friends that everything is progressing favorably, still, unless we have made an accurate diagnosis, some day when we least expect it, we will be caught napping. This is not such a serious affair as it might seem at first sight to the city practitioner, because he can go to the phone and in a few minutes he can have skilled assistants to help him, but not so with the country practitioner, because he must depend upon his own resources to help him through with a bad case.

Preparation of the Patient.

She should be lying in a horizontal position on a hard table or bed. The abdomen may be fully exposed or covered with

a thin sheet. Care should be taken to have the bladder, and, if possible, the rectum, empty. The examiner, after carefully warming his hands, to make the tactile senses more acute, and to prevent reflex contraction of the abdominal and uterine muscles, takes up his position at the patient's right side so that he can palpate with his right hand, while his left controls the fundus. It is of the greatest importance to get the confidence of your patients, so that they will aid you as much as possible by allowing their abdominal muscles to become completely relaxed. As a clinical fact you will often find that they will give the best relaxation when asked "to let their stomachs fall in." (McIlwraith.) It is also important that you should use very light pressure in palpating until she becomes accustomed to the situation, because if once she becomes alarmed her muscles will immediately go on guard, and so defeat your purpose.

Let us now imagine that we have a patient ready to be examined, and I will endeavor to describe in a clinical way the various grips used, and enumerate the different points that we may expect to demonstrate as we proceed with the examination, so that we will be in a position to make a diagnosis by the process of exclusion.

I. In making an examination we seem to instinctively fall into the habit of trying to locate the back first, and as the great majority of cases are normal, we generally expect to find it on the left side. As the most prominent part of the back is opposite the umbilicus, we always start to palpate in this locality, and hence this is known as the umbilical grip. We first place one hand on either side of the uterus. Now move them synchronously, first towards one side and then towards the other. By this means it will be found that greater resistance is offered to the hand on the side against which the back is lying. If this is not satisfactory, place one hand flat upon the abdomen so as to be over the centre of the uterus. Now press directly backwards. This will have a tendency to displace the fetus to one side of the amniotic sac, and the liquor amnii to the other. The free hand can now palpate both sides of the abdomen. On one side you will feel the firm resisting back, while on the other side you get a doughy sensation due to the fluctuations of the liquor amnii. If we are still in doubt, we grasp the upper fetal pole with the left hand, and as the lower pole of the fetus is fixed against the pelvic floor, if we press downwards towards the pelvis on the upper pole, we will produce a more marked flexion of

the back, so that the right hand in palpating can easily detect the difference in the resistance on the two sides of the abdomen. (Fig. 1.) A fourth method has recently been described by Dr. McIlwraith, which is especially useful in difficult cases where you have used the other methods and are still in doubt. As a result of palpating the central zone of the uterus by these different methods we can determine the following five points:

1. As already described we can locate the back.

2. We can usually feel one or more small irregular prominences on the opposite side of the abdomen, and the mother will probably tell you that it is in the same part of the abdomen she feels the movements of the child's limbs. Except in twins, finding the small parts in one section of the abdomen confirms the location of the back in the other. Small parts, few and hard to find, suggest an anterior position of the child, especially if they are found at some distance from the middle line. Perhaps you may chance to feel the gentle tap of the feet against the mother's abdominal wall while you are palpating. If these movements and irregular nodules are felt near the middle line, it is pretty strong evidence that the child's back must be against the opposite side of the uterus, which means that we are dealing with an occipital posterior position. (See diagrams 2 and 3 as compared with 1.)

3. In very rare cases we may find that the long axis of the child runs in a transverse direction, and then we feel either the round, hard head, or the broad, irregular breech at the side of the uterus, but this abnormality is so evident that one can usually recognize it at a glance.

4. Having determined upon which side the back is lying, we can go one step further and determine whether the occiput is probably in an anterior or posterior position. If the area of resistance corresponding to the back is followed upwards and downwards, and is found to present a uniform curve with a broad, smooth surface, which runs off smoothly on to the head, it is probable that the child is lying in the first or second position (l. o. a. or r. o. a.), but if the area of resistance is not so broad, is inclined to be straight instead of convex from end to end, and a distinct sulcus is felt where the hand passes over the anterior shoulder and on to the head, it is probable that you are feeling the side of the fetus instead of the back, and this, of course, would mean that you have either a right or left posterior occiput position. (Notice the difference between diagrams 1 and 2.)

5. Occasionally you may be able to diagnose the presence of twins by noting that the woman has an unusually large and tense abdomen. Sometimes you can demonstrate a groove running along between the two bodies, and occasionally you can palpate two heads, etc.

II. We now proceed to make use of the fundal grip to ascertain which pole of the fetus is occupying the upper zone of the uterus. Having located the back, we follow it upwards until both hands are placed over the upper pole of the fetus, but not necessarily of the uterus, and then by pressing the palms of the hands firmly against the abdominal wall we are able to keep the body of the fetus firmly fixed between them, while at the same time we can try for ballotment of the head with the tips of the fingers. If the head is occupying the upper zone of the uterus, we will be able to toss it from one side of the uterus to the other on account of the hinge movement at the neck, whereas in the case of a breech, the whole fetus will move *en bloc* when we try this test. The head is more movable than the breech, for two reasons:

1. On account of its globular shape it is not so completely invested by the uterus as the breech, but is only in contact with the uterus in certain places.

2. The articulations of the neck enable it to move from side to side independent of the trunk, while the breech being part of the trunk can only move *en bloc* with the latter. In consequence of this it is possible to ballot the head between the hands, a process which is impossible in case of a breech. If we do not get the ballotment of the head, and if the hand in following up the outline of the back seems to pass over a large, irregular, indefinite mass, and especially if we can feel the fetal small parts at the upper end of the fetus we can be pretty sure that the breech is occupying the fundus.

Note.—Jellett says that the upper pole in difficult cases has a tendency to get back behind the ribs, and that you can often facilitate your examination in these cases by pressing the lower pole upwards and backwards towards the same side on which the back lies. This will have a tendency to displace the upper pole out from its position behind the ribs, towards the centre of the uterus, and at the same time a little forward, so that the examining hand can more easily recognize its distinctive features.

III. Having ascertained upon which side the back is lying, and which pole of the fetus is occupying the fundus of the

uterus, we can now turn our attention to the lower pole of the fetus, and in studying its position we will first make use of the superficial pudic, or pawlic's grip. It is made by the fingers of the right hand. Place the thumb over the right Poupart's ligament, and the fingers over the left. Now gently sink them down and approximate them so as to grasp the lower pole of the fetus. Sometimes the layer of fat in the abdominal wall will obscure what you are feeling, and in these cases you can often improve the condition, by trying to insert your fingers in the interval between the fat and the ligament so as to lift the pad of fat up out of the way. (McIlwraith.) In this locality you would either grasp the head or the breech. The breech is much larger, more indefinite, much softer, less movable and presents no sulcus as one would feel between the head and the anterior shoulder, while the head is much smaller, is more movable, and presents the characteristic cannon-ball feeling which is so easily learned and is so impossible to mistake for any other part of the fetus. By using this grip we can determine thirteen diagnostic points:

1. Whether it is a breech or head presentation, as already described.

2. It is especially useful to distinguish a normal from an abnormal head presentation, because by this means you can diagnose between vertex, brow and face presentations, by observing the relative position of the chin and the occiput above Poupart's ligament. By occiput is meant the prominence of the occipital protuberance. In a normal case the head being well flexed, the fingers will naturally sink deeper on the side of the occiput than they will on the side of the flexed chin. (See diagram 1.) However, if the chin becomes extended you will get a brow presentation, the occiput will be thrown back, and it will be equally easy for you to sink your fingers on either side. Exaggerate this a little more and you get a face presentation, and this time the chin being fully extended, the fingers sink more easily on its side than they do upon the side which is now mostly occupied by the occiput (Diagram 3), or, according to Jewett, "If the chin lies higher than the occiput it is a vertex (Diagram 1); if both are at the same level, it is a brow, and if the chin is lower than the occiput it is a face presentation." (By "higher" Jewett means nearer to the fundus uteri.) (Diagram 3.)

3. If the chin can be felt anteriorly the case must be an occipital posterior, because the back of the head is against the posterior wall of the uterus.

4. If the patient is not in labor, and if the presenting part fills the brim, it can only be a vertex. (Pinard.) Normal primiparæ are generally engaged for three or four weeks before labor, while multiparæ are sometimes not engaged until the membranes rupture.

5. If the patient is in labor, and the head is past the brim, the resistance experienced by the fingers may also be due to some portion of the fetal trunk, which has become, or is becoming impacted within the pelvis. In such a case, the part of the fetus which is most usually felt is formed by the shoulder and a part of the back, and the head, or presenting part, would be on or near the perineum.

6. As a general rule, we may say that in primiparæ the head is generally fixed during the last three or four weeks of pregnancy, while in multiparæ it may not be fixed until the beginning of labor, owing to the greater relaxation in the bladder of the abdominal muscles. "So that, if we meet a case in which the head ballots freely above the brim at a time at which it should be fixed, pelvic contraction is the first condition to be thought of." (Jellett.) Other conditions which tend to prevent fixation of the head are: Pendulous abdomen, placenta previa, face or brow presentation, occipital posterior presentation, or a hydrocephalic head.

7. In using the superficial pelvic grip the most prominent part of the head is on the same side as the small part in a normal case (Diagram 1), and on the same side as the back in abnormal or face presentation. (Diagram III.)

8. The degree of ease with which the prominence is felt indicates the extent to which descent has occurred, but only an abnormal or face presentation. (Diagram 3.)

9. Sometimes the relative size of the child and its head can be roughly estimated, *e.g.*, hydrocephalic head.

10. You can often locate the anterior shoulder while using this grip, the shoulder on the left side of the median line indicating a left position of the fetus, and on the right side of the median line a right position of the fetus. The anterior shoulder, when near the median line, indicates an anterior position, and a distance from the median line an occipital posterior position.

11. During uterine contractions, on careful palpation in the region of the internal abdominal ring, one can often distinguish a round cord on either side (the round ligament), from which important information may be obtained. In the first place the intensity of the contraction gives us some idea as

to the manner in which the uterus is acting, and secondly, by noting their course as pointed out by Palm and Leopold, we are enabled to diagnose the position of the placenta in about eighty-eight per cent. of all cases. When the round ligaments are found converging towards the fundus of the uterus, the placenta is usually situated in its normal position upon the posterior wall, whereas, when they are parallel or diverging, the placenta is situated between them on the anterior wall.

12. During labor palpation also gives us valuable information concerning the lower uterine segment, when there exists some obstruction to the passage of the child, or some malposition of the fetus. You can sometimes notice in these cases that the retraction ring (the junction of the lower dilating part and the upper retracting part of the uterus) will be felt as a transverse ridge extending across the lower portion of the uterus. When it rises one and one-half inches above the symphysis it constitutes one of the signs of threatened rupture of the uterus, but here we must always exclude an extended bladder.

13. The location of the placenta, when implanted anteriorly, can sometimes be determined in external examination. The convex margin can occasionally be felt as a resisting ring, or you may notice that within the placental area the fetal parts are obscured to the touch.

Just here I might mention that I do not assume that the beginner will make out all these points, nor even that an expert can make them *all* out in *every case,* but if one will only take the trouble to examine every case that comes under his observation, he will soon become very expert, and by summing up all the points that he can demonstrate in each particular case under observation, he will rarely fail to make a correct diagnosis.

Deep Pubic.—To make this grip the examiner must turn around and face the patient's feet. He then places his hands over the abdomen so that the finger tips are just above Poupart's ligament. Wait for a moment or two, to catch the muscles off their guard; in the meantime ask the patient to take a full breath and then let it out. As the diaphragm ascends and the abdominal muscles relax, gently but firmly sink your fingers downwards and backwards under the pubic arch. This grip is only to be used after the presenting part has engaged, so your fingers will either come in contact with a large, soft, irregular mass corresponding to the breech, or the tips of your fingers will come in contact with a smooth,

round, globular mass corresponding to the head. In my small experience, when once I could feel that hard cannon-ball with the tips of my fingers, I felt as if I had progressed a long way in the diagnosis, because you are sure that you have a head presentation, and if it is engaged so well that you require the deep pelvic grip to feel it, you may be comparatively safe in thinking that you either have a normal presentation, or else you have a sufficiently roomy pelvis to accommodate the head in its malposition. The same rule applies here as in the superficial pelvic grip as regards the relative position of the occiput and chin, and is concisely stated in the following phrase: "That side on which the hand descends furthest is the side to which the back is directed, in a normal presentation, because the chin will be flexed and the hand will go down further on the side of the occiput."

Auscultation.—Auscultation of the uterus as a means of diagnosis is entirely a product of the nineteenth century. In 1818, Mayor, of Geneva, announced that the pulsations of the fetal heart could be heard in advanced pregnancy, by the ear applied to the abdomen of the mother. His discovery did not at first attract any great attention, and it was not until 1847 that Depaul described the practice of auscultation as a means of diagnosing the presentation of the fetus.

From the time of Depaul onwards the practice of auscultation has steadily increased in popularity, as a means of diagnosing, first, the *existence;* second, the *life;* third, the *presentation and position* of the fetus; fourth, the *probable situation of the placenta,* and fifth, *twin pregnancy.* It can be carried out in three ways:

1. By placing the ear upon the abdomen. This sometimes enables you to hear heart sounds that you would not be able to catch with the stethoscope, but I have always found that I could not localize them very satisfactorily by this method.

2. By using a stethoscope. This I have always found to be the most satisfactory, especially if you press rather firmly against the abdominal wall, as it then makes a solid medium which is better for conduction. With this method you can localize the sounds, and this is very important in diagnosing the position of the fetus.

3. I believe that Dr. Fenton prefers the phonendoscope, and that it should only be placed lightly upon the surface of the abdomen. He claims that he can hear sounds by employing this method that would not be detected by the other methods.

Fetal Heart Sounds.—These are sounds exactly similar to

the maternal heart sounds, with the exception that the rate is twice as fast and the sound is not so loud. They very closely resemble the ticking of a watch. Their average rate is 140, and the highest and lowest rate in the case of infants who have been healthy at birth is, respectively, 160 and 120 (Depaul), but in pathological cases they may be much lower, or so high that they can scarcely be counted. Some men claim that a slow heart count indicates a male child, while a rapid count indicates a female child.

I do not know just how much reliance most men put upon heart sounds for diagnostic purposes, but in the cases that I have seen during this year I have placed great reliance upon them, and have rarely seen them fail if their significance is properly appreciated. One should always remember the following rules:

1. In a normal primipara, if the case is a head presentation the heart sounds will be below the umbilicus, on the left side in an l.o.a. and on the right side in an r.o.a. (Diagram 1.)

2. If the case is an occipito anterior the heart sounds will have their site of maximum intensity close to the middle line—that is to say, about one to two inches from the middle line; while if it is an occipito posterior position the site of maximum intensity will be away out in the flank.

3. In breech cases, before the lower pole has started its descent the heart sounds will be heard at the level of or above the umbilicus on the right or left side according to the position.

Exceptions to these Rules.—1. In multiparæ the head may not engage until after dilatation has taken place, so you cannot put much dependence upon their position as regards their height in the abdomen; but, of course, their significance as to right and left is unchanged.

2. On account of the rectum being on the left side it is only natural that there is more room in the right oblique diameter, hence the great majority of cases start in this diameter, either as a left occipito anterior, or as a right occipito posterior. It is this right occipito posterior position of the fetus that is the stumbling-block to so many men, especially as the great majority of these cases turn to the second position as they descend into the pelvis. While the occiput is posterior the head will have a tendency to be in an extended position. This throws the chest forward so that the heart sounds are heard in front near the middle line, because the chest is in close contact with the abdominal wall. Therefore, when we locate the heart sounds in the site for the

second position, we must always consider the possibility of it being an occipito posterior position with the head extended.

3. In any face presentation, if the occiput is posterior, the head will be extended, and the baby's chest being thrown against the mother's abdominal wall the heart sounds will be heard near the middle line. (Diagram 3.)

The funic souffle is a blowing sound which is heard in certain cases on listening over the fetus, and which is synchronous with the fetal heart. It, as well as a very rapid or a very slow fetal pulse rate, is supposed to indicate a bad condition of the fetus.

4. Heart sounds heard in more than one position, especially if there is an interval between them where they are very indistinct or die away altogether, is the most important diagnostic sign we possess of the existence of twin pregnancy.

Vaginal Examination.—Internal examination is advisable in all cases as a part of the preliminary examination in women pregnant for the first time, and in others whose obstetrical history leads to a suspicion of pelvic deformity it is imperative. For my own part I think that we should depend almost entirely upon abdominal examinations for our diagnosis. The obstetrician must make one vaginal examination to guard against such an accident as a prolapsed cord or limb, and at the same time to secure confirmatory evidence of the correctness of his diagnosis by external palpation. By it can be determined:

1. The size and condition of the vulva and perineum. If you are examining a primipara try to estimate the probability of having a tear, and the amount of time it will require to prevent it. In multiparæ notice whether you have a relaxed outlet, or perhaps the presence of scar tissue indicating old tears. Perhaps you may chance to notice muconium upon your examining finger, or it may be noticed upon the aseptic pads covering the vulva. As a rule when we see muconium in the discharge we at once conclude that we have a breech, but this is not always the case. We may get muconium in vertex presentations, but it is always a sign for rapid delivery, as there must be some undue pressure upon the fetus.

2. As your hand enters the vagina you can estimate the size and condition of it, also the presence of a prolapsed cord or limb if such a condition should happen to exist in the case under examination.

3. Now hunt with your examining finger for the cervix. If it is readily found you can, as a rule, assume that you have a normal position, but if the cervix is placed far back in the

vagina so that it is hard to find with the examining finger, beware, as you will often meet this condition in malpositions of the fetus, especially occipito posterior positions. Having found your cervix, notice the amount of dilatation that exists, and whether the cervix itself is soft and dilatable, or hard and rigid. At the same time run your finger around the edge to see if there are any old tears in it. Another point to be noticed is the presence of a placenta previa, either marginal, partial, or complete. Always be prepared for trouble when the head begins to descend through the canal and pushes the undilated cervix before it.

4. If the cervix is dilated, notice the condition of the membranes. Does the probable stage of the labor, the amount of dilatation of the cervix, and pouching of the membranes seem to correspond, or does there seem to be something irregular about them? In a primipara, in a breech case, or, in fact, in any malposition, the presenting part will not fit accurately into the cervix. This allows the whole force of the uterine contraction to come upon the liquor amnii, and it, of course, tries to escape at the point of least resistance, which is the cervix. If the one is rigid you will notice that the membranes will protrude like the finger of a glove, and they will break early, but if the case is a multipara the cervix dilates easily, and you may find a large, wide pouch of membranes, which sometimes descends to the external os before it breaks. In any case, if you have the waters coming away with a rush in the early part of labor, suspect a breech or a malposition of the fetus.

5. Having ascertained the condition of the cervix and the membranes we have yet to determine which pole of the fetus is occupying the cervix, the amount of advance that it has made, and if there is sufficient room for it to pass through the bony pelvis. If the presenting part is not fixed, we endeavor to touch the promontory of the sacrum with our middle finger, while the base of the thumb is pressed against the subpubic ligament. If we cannot touch the promontory of the sacrum, we are pretty sure that we have plenty of room. If we can touch it, we mark the position of the subpubic ligament upon our first finger, and then measure the distance between this point and the end of the second finger. A measurement of four inches indicates a dangerously contracted pelvis, while three and one-half inches is generally taken to be too small for delivery of a live child per vaginam.

6. As to the nature of the presenting part and its fixity this should be determined by external examination; how-

ever, vaginal examination sometimes gives valuable aid. The first circumstance to excite suspicion on examination, even with the os undilated, is the absence of a hard, globular mass felt through the lower segment of the uterus, so characteristic of the head. Personally, I never bother with the fontanelles and sutures, except to note their presence and that marked separation of the head bones indicates a hydrocephalic head, as they are so often unreliable. In a breech case you get a much softer presenting part, offering three points of bony resistance formed by the tuberosities of the ischium and the tip of the coccyx. Its surface markings are the aperture of the anus and the external genitals. It must be diagnosed from a face presentation, but here you have the characteristic aperture of the mouth with its bony ridges for the teeth, and the fact that the anus does bite or grip your finger. (Dr. Adam Wright.) Lastly, in cases of doubt, where the cervix is well dilated, you can make sure of your diagnosis by introducing your hand into the cervix and feeling for an ear, etc. Be careful that the ear is not doubled upon itself.

The Course and Progress of Labor.—1. The progress of labor is best determined by noting the descent of the presenting part. In the early stages this can be determined by measuring in finger breadths its height above the pelvic brim.

2. After the chin has disappeared below the pelvic brim the rate of advance can then be determined by the deep pelvic grip until it has descended almost to the perineum, and by that time you can ascertain the amount of descent by noticing the amount of the bulging of the perineum until you feel the resistance of the presenting part.

Jellett says that this is a very much more reliable method of determining the advance of the head than is a vaginal examination, because in all cases of delayed labor with strong uterine contractions the caput succedaneum hourly increases in size and bulges downwards more and more; consequently we may be led when making a vaginal examination to attribute the diminished distances between the caput and the perineum to the descent of the presenting part instead of, as may be the case, to the increasing size of the caput.

In conclusion, I will briefly state the advantages of external palpation over repeated vaginal examinations:

1. It can be performed at any time before the beginning of labor without the use of an anesthetic. You can send your patient word that you will call upon her at a certain date, and request her to save a specimen of urine.

2. No patient can object to it upon the plea of indecency.

In fact it is an excellent procedure to overcome the extreme bashfulness of some patients. In these cases you can start with your hands under a thin sheet, or even an undercover, because you are intending to gradually work it off anyway.

4. It makes a good beginning for a complete physical diagnosis for the purpose of detecting heart murmurs, diseased breasts, etc.

5. Some men say that this is not practical, because, even if you do diagnose the position of the child during the last month of pregnancy, the position may be different at labor. In answer to this argument I say that it is practical because, in the first place, if you go at some convenient time and make sure that you have a normal position, you can rest assured that everything will come along in a natural way at the confinement. To be sure of this is worth something to a man if he happens to be engaged so that he cannot leave at once when he is called for the confinement. Secondly, although I do not dispute the argument that the child often changes its position during the last month of pregnancy, still on inquiry I have found out from men of large experience that although they have often noted that an abnormal may change to a normal, they have never seen a normal case change to an abnormal. So if we diagnose an abnormal position we will be prepared to deal with it, knowing that if there is any change in the position it will be towards the normal.

6. It must be acknowledged that its value is greater before than during labor. Before labor it is ten times more certain than vaginal examination, and even in labor, especially at the first of it, you can generally make a correct diagnosis by this method.

7. It practically eliminates the danger of infection through the vagina, owing to germs being carried upon your hands during some of the repeated examinations. It is now an acknowledged fact that we cannot completely sterilize our hands. Of course, we can wear gloves which can be boiled, but the great source of infection is the vulvæ, and the insurmountable barrier is that women will not consent to have *them* boiled. (McIlwraith.)

8. The progress of labor can be judged just as accurately after a little practice by this method as it can by repeated vaginal examinations.

9. It compels a man to study the different positions of the child and their relations to the birth canal before he can use this method, and thus it makes him a more intelligent obstetrician.

Selected Article.

ON THE RELIEF OF CERTAIN HEADACHES BY THE ADMINISTRATION OF ONE OF THE SALTS OF CALCIUM.

By GEORGE W. ROSS, M.A., M.B. (Tor.), M.R.C.S. (Eng.), L.R.C.P. (Lond.)
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There occurs frequently in women, and occasionally in men, a type of headache which commonly presents the following characteristics: (1) It is present and most severe on waking and tends to lessen in intensity or altogether disappear in from one to six hours. (2) It usually manifests itself as a dull, heavy ache or as a frontal or temporal throbbing. Less often it is occipital, vertical, or unilateral. Infrequently it is neuralgic. (3) In its most typical form it is exceedingly chronic, often of several years' duration, and most intractable. It also exhibits itself as the common occasional headache to which many people are subject. (4) *It is associated with a deficient coagulability of the blood.* The subjects of the chronic form of this headache are usually of the lymphatic type. The expression is heavy and listless. The face is full and the eyes are often puffy. Some anemia is the rule, and it varies in intensity from a slight paleness to an actual chlorosis. The whole bearing exhibits mental and physical lassitude. Hereinafter the term "lymphatic type of headache" will be understood to refer to the above-described cephalalgia.

It is convenient to consider at this point certain symptoms commonly met with, and of the following several or many are usually found associated with the lymphatic headache:

Symptoms.	Number of cases.
Pain after food	23
Edema either in the face or extremities	21
Shortness of breath	22
Chilblains or urticaria	8
Neuralgia	4

(1) *Alimentary.*—Anorexia, nausea, pain after food ("heartburn") and constipation. The last is the rule.

(2) *Respiratory.*—Cough and shortness of breath; rarely expectoration.

(3) *Cardiac, etc.*—Palpitation and hemic murmurs. Full, soft pulse.

(4) *Genito-urinary.*—Slight albuminuria; amenorrhea, menorrhagia, or dysmenorrhea.

(5) *Cutaneous and Subcutaneous.*—Chilblains, urticaria, and edema. The last manifests itself more commonly as a morning fulness beneath the eyes and less frequently as an edema of the feet and ankles or legs.

(6) *Central Nervous System and Mental.*—The sleep is usually heavy, but the patient wakes less rested than before going to bed, or the sleep may be very disturbed. Irritability combined with languor is characteristic. All degrees of mental depression are found.

Pathology.

In a series of communications Professor A. E. Wright has reported his investigations into the pathology, especially of chilblains, urticaria, certain edemas, and "physiological" albuminuria. He has shown that the pathological basis of these conditions is a lowered coagulability of the blood, dependent as a rule upon a deficiency of the salts of calcium in the blood. He conceives that such altered properties of the circulating medium conduce to transudation of the plasma from the blood-vessels into the lymph spaces. This morbid process he terms "serous hemorrhage," and it is this serous hemorrhage which determines in the skin an urticaria; in the subcutaneous tissues certain edemas and chilblains; and in the kidney physiological albuminuria.

The association in a patient of severe chronic headaches and of a troublesome urticaria along with deficient coagulability of the blood, and further the vanishing of the headaches and the urticaria on treatment with calcium chloride, suggested to me that serous hemorrhage might also be the basis of these headaches and led me to a further investigation. The results of this investigation are that ten out of fourteen cases had a lowered coagulability of the blood and that two cases, which alone were investigated in this regard, showed a deficiency in the normal amount of calcium salts present in the blood. Further, the exhibition of a salt of calcium (which was undertaken in ten cases of lymphatic headache definitely shown to have a lowered coagulability of the blood) was followed by the exaltation of the coagulability of the blood. Concomitantly with, or closely following upon, this alteration in the blood the headaches were almost invariably relieved, even although the headaches were associated with but five cases showing such

overt symptoms as chilblains or urticaria. Moreover, the headaches and the chilblains (which were both present in each of the three cases quoted) disappeared on the administration of a salt of calcium, with the consequent exaltation of the coagulability of the blood. They reappeared on decalcification of the blood with citrate of potassium, with the consequent diminution of the coagulability of the blood, and both the headaches and the chilblains in all three cases a second time disappeared after a second time administering a salt of calcium. The coagulability of the blood was again considerably increased. In view of these facts, therefore, I feel justified in believing that the lymphatic type of headache is but another manifestation of the morbid process above described as "serous hemorrhage."

It will be seen that pain after food occurred in twenty-three out of forty-eight cases of chronic lymphatic headache. This frequent association can, I believe, be reasonably ascribed to the same pathological process which I have endeavored to show underlies the lymphatic headache—namely, serous hemorrhage. The following explanation is offered. If the walls of the stomach become the seat of serous hemorrhage due to the lowered coagulability of the blood, then the sudden accession of a considerable quantity of blood, consequent upon the act of digestion, would cause a rapid increase of pressure upon the nerves of the stomach wall, which would result either in the gastric pain or only a sense of fulness. The following facts support this view: (1) Gastric crises are common in urticaria. (2) The occurrence of gastric crises in Werlhoff's disease. (3) The pain after food usually disappears when control of serous hemorrhage has been established by the exhibition of a salt of calcium.

Treatment.

The investigation of headaches of the lymphatic type elicited the fact of a deficient coagulability of the blood. It then occurred to me that the adoption of a form of treatment capable of exalting this deficient coagulability would control the symptoms. To this end I administered one of the salts of calcium. In almost all cases complete relief has followed this form of treatment not only of the headache but of many of the associated symptoms. It is, however, important to estimate the coagulability of the blood before beginning treatment, because, as a general rule (to which there is an

occasional exception), unless there be a deficient coagulability of the blood, no benefit from the administration of a salt of calcium need be expected. The following embodies the principles of the treatment:

(*a*) *Medicinal.*—(1) The administration of one of the salts of calcium. Of the two which have been used the lactate of calcium is to be preferred to the chloride because the latter is unpalatable, often nauseating, and occasionally not absorbed, whilst the lactate is much less open to any of these objections. The following has proved a satisfactory mixture: 15 grains of lactate of calcium, half a minim of tincture of capsicum, and 1 ounce of chloroform water; to be taken three times a day before meals. If more convenient one may prescribe as a powder 15 grains of lactate of calcium, which should be dissolved in one-third of a tumbler of water and taken before meals. If the lactate of calcium be not available, the chloride may be administered: 15 grains of chloride of calcium and 1 ounce of camphor water; to be taken three times a day before meals (if nauseating it may be given after meals). (Calcium lactate may be combined with the bitters, with iron, with strychnine, etc., but may not be combined with the alkalies or their carbonates.) (2) Regulation of the bowels. Constipation is a common accompaniment and must be controlled. Mild aperients, such as salines or liquid extract of cascara, are usually sufficient.

(*b*) *Dietetic.*—The ingestion of one or two pints of milk a day is advisable though not essential. The patient should be counselled against eating oysters, crabs, strawberries, etc., which seem to contain certain lymphagogic agents. It is best to avoid malt liquors and wines. The medicinal treatment of the constipation should be supplemented by a suitable dietary. Such a regimen in chronic cases is almost invariably successful.

In a number of cases, usually of the less severe type, considerable relief is felt in from a half to one and a half hours after the exhibition of the calcium salts. In others the relief comes during the first twenty-four hours of treatment, whilst in almost all the headaches disappear after the fourth day. Very occasionally a severe chronic headache of long duration is but little affected in less than ten days' treatment. It is advisable to continue the administration of one of the salts of calcium for a period of three weeks in the milder types of the lymphatic headache and for six weeks in the severer types. For the relief of the occasional lymphatic headache,

which is very commonly met with, the exhibition of half a drachm of calcium lactate is usually successful in from half an hour to one hour.

It is convenient to set forth in tabular form certain clinical data and the results of the various blood examinations in fourteen cases of lymphatic headache. In addition to the fourteen cases tabulated I have treated thirty-four more, making forty-eight in all. The following is a synopsis of the forty-eight cases:

(1) All definitely conformed to the lymphatic type of headache above described, and of these forty obtained complete relief and eight considerable, though not complete, relief.

(2) In four cases neuralgia occurred, two facial and two of the nerves of the lower extremities. In all relief was coincident with the disappearance of the headache and the edema.

(3) In twenty-three cases there were pain after food. Of these, sixteen found complete and seven partial relief. Further, the rapidity with which this result was obtained appears to me to be strong evidence in favor of the above-mentioned theory as to the causation of the gastric pain.

(4) In twenty-two cases dyspnea occurred. Twelve were completely relieved, nine partially, and one not at all. Shortness of breath has proved the most intractable of all symptoms.

(5) Edema of the eyes or of the extremities occurred in twenty-one cases, and of these seventeen were completely and quickly relieved. Puffiness of the eyes is readily controlled, but edema of the feet usually requires several weeks' treatment.

(6) Chilblains occurred in six cases and urticaria in two. All eight cases obtained complete relief of pain and swelling. A glossy erythema sometimes persisted for a considerable period after the chilblain had disappeared, but it caused no discomfort whatever.

(7) In the majority of cases some anemia was apparent, though usually not pronounced. In about 25 per cent. of the above cases there was slight or severe chlorosis, and of the latter there were several in whom the anemia was greatly lessened or controlled during treatment. The evidence, however, is insufficient to speak positively on this point.

(8) Languor was practically always an accompaniment of this condition, and one of the most astonishing results was the almost invariable improvement in mental and physical

tone which followed the control of the morbid process conducive to serous hemorrhage.

(9) Relapses occurred in eight cases, as a rule apparently due to the return to a careless mode of living or to dietetic indiscretion. The symptoms in all the cases were a second time easily controlled by treatment.

Conclusion.

That we have in the salts of calcium a therapeutically rational and effectual means of relieving headaches which are due to a deficient coagulability of the blood.

Possible Further Applications.—(1) In the treatment of those neuralgias accompanied by a deficient coagulability of the blood, four cases have been treated with success. (2) In the treatment of migraine. In two typical cases the paroxysms have practically ceased during treatment with calcium lactate.

Note on the Relief of Headaches and the Edema of Chronic Nephritis.—Six cases of chronic nephritis have been treated according to the principles enunciated above. In five the headaches and the edema were greatly lessened by the administration of a salt of calcium. One case obtained only partial relief. The details of this investigation will appear in another communication.

I wish to acknowledge my indebtedness to the honorary and resident staff of the City of London Hospital for Diseases of the Chest for allowing me to investigate cases which were under their care at the hospital.—Abstract, *The Lancet,* Jan. 20th, 1906.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A CLARKSON.

Landry's Paralysis.—R. McGREGOR (*Jour. Amer. Med. Assn.*).

The writer discusses a case of Landry's paralysis in view of the pathology and etiology of the affection. He believes that it is a toxemia especially affecting the anterior horns of the gray matter of the spinal cord. In the more virulent intoxications the peripheral nerves may also be implicated. These are the cases which give the most trouble in making a diagnosis. The high mortality of this affection is in striking contrast to multiple neuritis and anterior poliomyelitis, with which it is most liable to be confounded. In the case described the attack followed vaccination. It was preceded by chilly sensations, fever, sweating, and vertigo. The rapidly ascending paralysis within the first week involved all four extremities, including speech and deglutition and the ocular muscles. There was cardiac irregularity and dyspnea, but there was no pain or nerve tenderness and no fever after the stage of onset. The patient slept well and took a fair amount of nourishment. At the end of two months the bulbar symptoms improved, but recovery was not approximately complete until two years. The patient has not attained his former weight. There is a slight foot-drop, most marked in the right leg, and the knee-jerks have not returned. In the treatment the best results seem to follow the use of a simple solution of the glycerophosphate of iron with small doses of strychnine.—*Medicine.*

A New Hysterical Stigma.

In the October number of the *Journal of Nervous and Mental Disease* W. W. Graves offers a comment upon a new and apparently constant stigma in hysteria; this he has confirmed in a number of cases. Of the subjective symptoms, pain and paresthesia, and of the objective, anesthesia and analgesia are the most constant. In a recent series of forty cases sensation was found normal in only five per cent. This particular sensory disturbance which he here relates he discovered while examining a patient who had had frequent hysterical fits and other hysterical manifestations. This was consistent

in anesthesia associated with hyperalgesia sharply confined to the areola-nipple area. He was so impressed with his findings that he has since made it a rule in private and clinic work to note especially the state of sensation of the areola-nipple areas in every individual coming under his observation. These observations have shown that the disturbance was found in no normal case; that it was not present in any organic disease, neurosis, or psychosis unless hysteria was a complication; and that in every case of hysteria, thirty in all, six males and twenty-four females, this phenomenon was invariably present. Some of his colleagues have confirmed his observations, and his own experience compelled him to consider the areola-nipple anesthesia associated with hyperalgesia as a pathognomonic and apparently constant stigma in hysteria, and that it may be of assistance in helping to differentiate between the so-called functional disorders, and between the hysterical and the organic.—*Medical Age.*

Fever during Menstruation as an Early Sign of Tuberculosis

Franck (*Berl. Klin. Woch.*) believes that a rise in temperature preceding or during menstruation is a strong presumptive sign of a morbid process somewhere in the body—usually tuberculosis. If the woman be anemic and thin, with a tendency to sweat and to take cold readily, antituberculosis treatment should at once be inaugurated. Sabourin and Kraus have also recently pointed out the likelihood of tuberculosis in cases where there was fever during menstruation. —*Medical Times.*

Post-mortem Examinations which do not Reveal the Cause of Death.—F. J. Smith (*Brit. Med. Jour.*).

It is a common belief in the laity and not rare in the medical profession that all that is necessary to ascertain the cause of death is to make a post-mortem examination. In 2123 post-mortem examinations performed carefully and recorded with exactness at the London Hospital, no less than 102 presented no naked-eye changes to which death could be attributed. In the period covered by the report there were 115 cases of death ascribed to wasting without obvious clinical cause and diarrhea and vomiting. Of these no fewer than 83 showed nothing in any of the internal organs to which death could be ascribed. In all these cases it would have been impossible for autopsy alone to explain the death. Where there is extensive injury and laceration of tissues with severe

hemorrhage the cause of death may be stated, but where disease is found in the heart, lungs, stomach, or kidneys without clinical history the most that the pathologist can say is: "I found gross disease of such and such organ, and it would be sufficient to account for death sooner or later and may have caused it now." In concluding the writer says that a verdict arrived at based on the pathological evidence alone is often valueless. It is absolutely essential in arriving at a correct conclusion that the clinical history should be coordinated with the pathological findings. The latter are important and valuable, but the two should be associated in order to arrive at a correct conclusion.—*Medicine.*

Should the Youth of this Country be Instructed in a Knowledge of Sexual Physiology and Hygiene?

Prince A. Morrow (*American Medicine*) says the general principle is laid down that the education of the public is the most valuable of all measures for the prevention of communicable diseases. Its importance is emphasized in the case of diseases the communication of which lies entirely within the control of the individual. The object of the proposed education is to give the youth of this country a clear comprehension of certain physiologic truths which have a direct bearing upon the regulation of their sexual lives, and of the serious consequences in the shape of disease and death which follow a breach of hygienic laws. In other words, it is to teach them how to live according to the laws of a healthy nature. This instruction in the physiology and hygiene of the sex function should form an essential integral part of the education of youth.

Dr. Morrow criticizes our present educational system, the policy of which is to launch the young into the world in complete ignorance of everything pertaining to the laws of life reproduction. In seeking this knowledge the youth is but obeying a law of his mental evolution. Since this knowledge cannot be had from legitimate sources—from parents and instructors—it is gained surreptitiously, and usually from depraved sources, dissolute companions or erotic or quackish literature. To be salutary as a safeguard, therefore, this hygienic education should be given in youth, for it is during this period that the foundations of what may be termed the "sexual character" are laid, and habits of mind and practices are formed which in a great measure determine the future sexual life of the individual.

Action and Uses of Digitalis in Cardiac Failure.—J. M. BRUCE (*Brit. Med. Jour.*).

An analysis of a case is given which illustrates the importance of studying the amount of urine when administering this drug. A patient was admitted to the hospital with marked cardiac incompetence. He was placed on the ordinary dry diet. The amount of the drug was gradually increased for several days, and when the dose of the tincture of digitalis was raised to 15 minims every four hours the amount of urine was raised from 23 to 70 fluidounces, subsequently going up to 180 ounces. If good results would be obtained from digitalis in cardiac failure it should not be given in moderate doses. Ten minims of the tincture every four hours will suffice in the majority of cases, but there are instances in which it is required in larger doses. The discredit into which digitalis has fallen may be in part due to the fact that it is given in too small doses. Digitalis has what may be called a cumulative action. No matter what the size of the dose it will take a considerable time to develop its diuretic effect. After compensation has been restored, then the non-medical measures for sustaining cardiac efficiency must be employed. In using digitalis in cardiac insufficiency emphasis is to be laid on the importance of measuring the urine. The volume of the urine is a sufficient index of the patient's condition and progress. There may be doubt as to the character of the pulse or of the physical signs and symptoms, but the quantity of the urine can be accurately measured, and its variations are a delicate index of the progress of the case and afford the most striking indications for the administration of digitalis.—*Medicine.*

Pathology and Bacteriology of Serous and Purulent Pleural Effusions in Children.—J. G. EMANUEL (*Lancet*).

Purulent effusions are far more common before the tenth year than they are afterward. Under three years of age it is almost certain that the accumulated fluid is purulent. About 75 per cent. of empyemata in children are due to the pneumococcus. They may be divided into two groups—those associated with pneumonia and those which are primary; 17.6 per cent. of the empyemata of children are caused by the streptococcus. This infection may occur alone or be associated with the pneumococcus or the tubercle bacillus. The streptococcus is not infrequently found in empyemata secondary to suppurations in other parts of the body. About 25 per cent.

of the empyemata in adults and children are due to the tubercle bacillus. It is rare to find the bacillus in purulent effusions. The virulence of these different infecting agents varies very much. From the standpoint of bacterial involvement there is no difference between purulent and serous effusions. Both varieties may be produced by the same infecting agent. Netter's observations show that many cases which are supposed to be due to traumatisms or cold were often found tuberculous, and those in which there was a simple serous effusion were found in a considerable proportion to be tuberculous. He concludes that 40 per cent. of all primary exudates are tuberculous, and that in serofibrinous pleurisy the tubercle bacillus is the most common agent.—*Medicine.*

Congenital Tuberculosis.

Friedmann relates the results of two years' experimental research with the aid of the Bose endowment. It was noted that week-old embryos of rabbits almost invariably contained tubercle bacilli when such bacilli had been injected into the vas deferens of the parent rabbit a few weeks before coupling. If the coupling took place after an interval of more than four weeks, conception did not follow. When animals had been infected by way of the lungs, and the process had passed into a latent stage, no tubercle bacilli could be discovered in the embryos and they developed into healthy animals. Infection by way of the peritoneum became generalized so quickly that conception seldom followed coupling. A few tubercle bacilli could always be found in week-old embryos when, immediately after coupling, tubercle bacilli had been injected into the mother rabbit's vagina. Intraperitoneal and intravenous infection always prevented conception later when the infectious process was in progress. Subcutaneous infection of the mother animal immediately preceding coupling generally resulted in the finding of isolated tubercle bacilli in the liver of the fetus. They had evidently passed through the placenta. They always proved to be avirulent, and the embryos developed into healthy animals. Examination of sections of six pairs of testicles from cadavers of consumptives failed to reveal tubercle bacilli in any quantity. Only two bacilli were found. Similar sections of testicles from lepers showed swarms of lepra bacilli in the sections of the testicles. Friedmann adds that in 983 tuberculous patients with a parental history the father had been tuberculous in 51.2 per cent., the mother in 32.8 per cent. and both parents in 15.9 per cent., showing the

preponderance of paternal tuberculous records. In all his experiments the embryos, although harboring tubercle bacilli, yet developed normally and were not to be distinguished from normal animals.—*Virch. Arch. and J. A. M. A.*

Trauma in Relation to Affections of the Pancreas.

Hilgermann reports a case of carcinoma of the head of the pancreas developing in a healthy man of fifty at the point where he had been injured in an accident eight months before death. The case suggests the possibility that malignant disease may follow trauma of the apparently most inaccessible organs. The development of the symptoms suggested an intimate connection between the injury and the cancer.—*Virch. Arch. and J. A. M. A.*

Calcification of Aorta in Rabbits after Injections of Adrenalin

Scheidemantel's experiments have confirmed those of Josué and others, who found that long continued intravenous injections of adrenalin induced marked changes in the aorta. The changes were very pronounced in some of the rabbits, while in others they were insignificant. The changes resembled more the calcification of the media in the arteries of the extremities in man rather than arteriosclerosis. In order to approximate the conditions of the development of arteriosclerosis in man, the animals should be kept permanently under the influence of blood-pressure-raising substances, not the mere brief and intense experimental work yet done in this line.—*Virch. Arch. and J. A. M. A.*

Arteriosclerosis in Children.

Oppenheimer reports two cases of arteriosclerosis in boys of nine and ten. In the first the child succumbed to a spontaneous rupture of the aorta. High blood pressure and a possible congenital weakness of the wall of the artery were the cause of the affection in the first boy, but in the second it was undoubtedly of toxic origin. The pathologic anatomic findings in each case were those of typical arteriosclerosis.—*Virch. Arch. and J. A. M A.*

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. McILWRAITH, FRED. FENTON AND HELEN MacMURCHY.

The Methods of Artificially Dilating the Cervix during Pregnancy.

Sir Wm. J. Sinclair (*Jour. of Obst. and Gynecol. Brit. Emp.*, Sept., p. 149) reviews the conflicting views expressed at the recent Congress of the German Gynecol. Soc. In advising the course to be adopted in general practice he condemns the various rapid dilators which have been constructed on the Bossi principle. They have inflicted ghastly injuries on the cervix, as extensive as those which may result from the premature application of the forceps. Incision of the cervix he also condemns. Digital or manual dilatation he thinks the most dangerous method of all, even when the os is dilatable. The effects to be expected are laceration, hemorrhage and sepsis. The method to be adopted depends on the object in view and the stage of the pregnancy or labor.

In the early stages of pregnancy, if abortion has to be induced because of threatened death from hyperemesis, the best treatment is to use a laminaria tent. It both dilates the cervix and stimulates the uterus to contract. Its slowness of action is one of its chief advantages. The objection is made that it may produce sepsis. But laminaria tents might be saturated with antiseptic fluids and rendered not only aseptic but bactericidal. A good deal remains to be done to improve them.

In later pregnancy, for example, in the induction of premature labor for slightly contracted pelvis, the practice most in vogue is dangerous and uncertain. The practitioner after more or less perfunctory cleansing of the vagina and os uteri pushes a bougie into the uterus. It would be a great improvement to begin dilatation and stimulation to contraction by means of laminaria tents of suitable length and calibre, and to continue if necessary the process of induction by sausage shaped silk bags or balloons. The non-elastic bag is a great improvement on the old india-rubber article, which could be used with comparative safety only once. The silk bag can be readily made aseptic, and by gentle patient manipulation the danger of laceration can be reduced to the vanishing point.—*Med. Review.*

The Treatment of Abortion.

H. J. Boldt, New York (*Journal A. M. A.*, March 17th), divides the treatment of abortion into four parts: 1. Imminent or threatening abortion. 2. Progressing inevitable abortion.

3. Incomplete abortion (retention of some of the products of conception). 4. Complete abortion. As regards imminent abortion, there is a practical unanimity of opinion of the objects to be attained. In the other forms there is a wide variance of opinion. Boldt would restrict active intervention in the conditions to cases in which it is absolutely indicated, and if retained conception products have to be removed, it is better, he thinks, to use the finger, if possible, than the curette. He has not observed that patients treated by aggressive methods were better off later than those treated without such intervention. This does not mean absolute non-intervention in all cases, but that the expectant plan of treatment should be preferred and adopted so far as possible. He gives detailed instructions as to the special treatment of the different conditions of imminent, progressing, incomplete and complete abortion, including the use of the tampon, the curette and other methods. When the curette is used he prefers a broad, sharp instrument to a dull one as more efficient and less likely to perforate than a small one. Particular directions are given as to the introduction of the intrauterine tampon, which should be done under the strictest aseptic precautions, and not after simple washing of the vulva, with the patient in bed. In cases of typical bleeding after supposed complete abortion, where it is advisable to examine the uterine cavity, he finds discission of the posterior cervical wall a more satisfactory method of reaching it than the use of dilators. It is quicker, and makes a clean wound that can be closed by a few interrupted chromicized catgut sutures after examination. In case of infection the uterus should be emptied as soon as possible, the cervix being dilated if necessary. The article is full of instructive details. In conclusion, he reports two cases; one illustrating the sometimes puzzling conditions met with in the severer cases of sepsis after criminal abortion, and the other showing the absence of detectable pathogenic micro-organisms sometimes observed even with the most virulent uterine sepsis.

Acetone and Diacetic Acid in the Urine in the Pernicious Vomiting of Pregnancy.—By Helen Baldwin, (*American Journal of Med. Sciences*)

The degeneration of the liver noted by Ewing in pernicious vomiting of pregnancy, as well as in eclampsia, suggested to the writer that in these conditions there might be found urinary changes due to the hepatic disorganization. In the similar condition of phosphorus poisoning the urine is known to contain pathological organic acids and acetone. The follow-

ing case shows that in the pernicious vomiting of pregnancy acetone and diacetic acid may be excreted in the urine:

A woman, aged 26, was married in November, 1904. The last menstrual period occurred on January 8th, 1905. About February 5th she began to have nausea, but vomiting did not begin until the 20th, at which time she was very constipated. The vomiting was relieved by ordinary treatment, rest and restricted diet, but on March 4th a violent attack occurred. From the 8th to the 30th she was kept in bed and fed almost entirely by nutrient enemata. Any attempt to feed by the mouth was followed by severe headache, nausea, and vomiting. There was great restlessness, twitching in the limbs, blurred vision, pain in the back, and intestinal colic. Four small hemorrhages took place from the bowels, the source of which appeared to be the rectum. On March 20th she vomited fourteen times during the day. She became progressively worse, and each attack of vomiting was more alarming than the previous one. Abortion was induced on the 30th and uninterrupted recovery ensued.

The following observations on the urine were made: On March 25th 600 c.c. were passed in the twenty-four hours with a s.g. of 1,028. There were a trace of albumin and a marked reaction of acetone and diacetic acid. No sugar was present. The amount of organic acids present was equivalent to 12·2 c.c. of a decinormal solution of sodium hydrate. The urea amounted to 8·86 gr. On the 29th 640 c.c. were passed containing 8·812 gr. of urea. The amount of nitrogen present as ammonia was 4·75 per cent. of the total nitrogen. Marked reactions for acetone, diacetic acid, indican, and phenol were obtained. Twenty-four hours before the operation the reaction for diacetic acid was more marked than on the previous day. On the 31st, the day after abortion, the amount of urine rose to 1,260 c.c., there was a distinct reaction for albumin, and granular casts were present. The amount of diacetic acid and acetone was considerable, but less than before the operation. On April 1st there was a distinct reaction for acetone, but only a trace of diacetic acid was present. After this the amount of these bodies diminished, but not in a regular fashion. On the 3rd, 4th, and 5th they were absent, but on the 8th there was a marked reaction for diacetic acid and a trace of acetone was present. It is noteworthy that on this day there were severe headache, nausea, and vomiting. A high degree of intestinal putrefaction was indicated by large quantities of indican and phenol in the urine by a high ratio of the combined sulphates to the pre-formed sulphates (1 to 1·9).—*Med. Review.*

Editorials.

MIDWIFERY AS THEY HAVE IT IN BRITAIN.

Two articles, one by Dr. Horrocks, Senior Obstetric Physician to Guy's Hospital, and one by a less known writer in Aberdeen, appeared in the *British Medical Journal* for March 10th. These articles would seem to show that the art of midwifery has not advanced much in the Old Land during the past sixty years or so. Dr. Horrocks' article is on "Midwifery of the Present Day." He says: "One must never use the forceps to shorten the sufferings of labor (of course I am speaking of normal cases). You cannot terminate labor before the parts are ready without doing some damage." Dr. Horrocks gives us no idea of what he considers a normal labor. The parts are often ready for delivery long before the child is born, and the skilful use of the forceps preserves rather than injures them. Furthermore, we consider the relief of pain to be one of the greatest privileges, as well as a duty of the physician. Again, "My advice to you is not to give it, *i.e.*, chloroform, at all if you can possibly help it. It is unnatural for a woman to be unconscious when the child is born. The reflex stimuli, or afferent impulses, are interfered with, and the resulting parturient forces are, to some degree, at all events, impaired." The old prejudices, which Sir James Young Simpson fought so hard to overcome in his day, are not dead yet, it seems. Must we repeat the argument that on the occasion of the first birth the Lord threw Adam into a deep sleep?

We are not to follow down the uterus with the hand. We are not to express the placenta—leave it all to nature. We must not use Crede's method for the prevention of ophthalmia. We are not to examine our patients before labor, unless they be sufficiently well informed to ask us to do so. Surely Dr. Horrocks must be an anti-vaccinationist also! Again, "At Guy's Hospital, for many years the women whom we attend—more than 3000 per annum—are not examined at all when

they obtain their cards entitling them to send for the extern attendant. The distribution of the cards is carried out by a clerk, who is not even a medical student, and, so far as I am aware, no harm has resulted from this practice." We suppose that, in the truly British fashion, they have "blundered through." It seems to us a criminal neglect that so excellent an opportunity to do good obstetrical teaching is thrown away. The one redeeming feature about the matter is that the article has excited much adverse and no favorable comment from correspondents. Perusal of the correspondence leads us to suspect that in the London hospitals there are some leaders who do not lead.

The second paper is on "Occipito-Posterior Presentation." This writer seems to have noted many of the more conspicuous symptoms of labor in this position of the head, but he most ignominiously sums up his treatment thus: "The best advice seems to be, allow nature a long time in which to rotate the head. Attempts at rotation by forceps usually fail. Pressing upon the front of the head during a pain is a safe procedure, and sometimes accelerates rotation. Best of all—go away and attend to other work and upon your return you will generally find the child born. In any case, think twice before using the forceps."

Perhaps the best comment on this advice is furnished by a correspondent who wrote to the *Journal* on March 17th: "In the spring of the year I attended a young and muscular woman in her first confinement. The labor commenced, but the first stage was unduly prolonged. I waited for three days; at the end of this time it was necessary to take serious stock of the situation." This gentleman had then recourse to a specialist, who rotated the head manually and delivered with the forceps. England has produced some great obstetricians, to whom the world owes much, but the general, and in some cases, this special practice does not seem as yet to have been lifted above the level of the midwife.

UNIVERSITY COMMISSION.

We publish in this issue a synopsis of a report of the Royal Commission on the University of Toronto. The complete report shows evidence of careful preparation in every one of its sixty pages, and gives a wondrous amount of very valuable information in a very clear and concise way.

In the first place, it suggests that the Government shall appoint a board of officials, in whom shall be vested supreme power as to the control and management of the Board. This board is to consist of fifteen members, the Chancellor and the President of the University, and thirteen others to be appointed by the Government.

The Commission tells us that the Faculty of Medicine in its relation to the University reveals one of the defects in the administration system which weakens executive control of the whole institution. It is said that the efficiency of the faculty is mainly due to the personal sacrifice made by members of its teaching staff, who receive inadequate remuneration for their services. It also says that although the state thus saves at the expense of the profession, it loses in the opportunity to help build up a great school of medicine. It is pointed out that state universities elsewhere have grasped more firmly and intelligently than has been realized in Ontario, the public value of medical education, and its intimate relation to the health of the public. It is held, therefore, that the future relations of the Faculty and the University should be radically modified, and that some of the claims of medical science upon the University should receive immediate acknowledgment.

TORONTO GENERAL HOSPITAL.

A statement has been recently published to the effect that the trustees of the Toronto General Hospital have set aside two wards (ward 25 for female patients, and ward 13 for male patients) for the reception of any patients sent in by the profession at large or by fraternal societies. The practitioner

or society physician, whether a member of the hospital staff or not, may treat such patients and collect his fees. The charge for patients in these wards will be $7.00 per week. Such patients will not be used as clinical material without the approval of their own physician.

Certain wards are now being used for semi-private patients in the General Hospital, the Eye and Ear Department, the Pavilion and the Burnside. The rate of $10.50 per week is charged for semi-private patients, who are at liberty to have their own medical advisors.

MUSKOKA COTTAGE SANITARIUM.

We are indebted to Dr. J. H. Elliott, physician-in-charge, for the Eighth Annual Report of the International Sanitarium Association for 1904-5. The number of patients under treatment for the year, 253, is greater than in any previous year. The largest number in residence at one time was 67. During the year two additional tent cottages have been built, making twelve in all. It is proposed to erect three more at once to provide for increased accommodation. These tents afford a simple means of increasing the number of beds, but do not take the place of properly constructed cottages, or other permanent buildings.

It has been supposed by many that the presence of such a sanitarium would produce evil effects, and retard the progress of the town in which it is situated. In answer to certain inquiries in this regard, Dr. Elliott quotes as follows from the Gravenhurst *Banner*: "In 1896, the year in which the sanitarium was built, the population was 1900; this year, 1905, it is 2382, showing an increase of 25 per cent. The assessment in 1896 was $290,000; this year it is $420,000, an increase of 44 per cent. The town's future is promising, and the people in the district prosperous. Houses are at a premium at increased rents, and there are no vacant stores in town. Business in general have directly benefited by the presence of the sanitarium, and there is more business done

in Gravenhurst to-day than ever before. There is also an unprecedented demand for skilled and unskilled labor. The public health has not suffered. No case of consumption in town can be traced to its presence. That the sanitarium is a benefit to the town and farmers is a certainty."

Dr. Elliott in giving results tells us that with growing experience it is shown that a fair proportion of the far advanced cases may be admitted with great benefit to themselves and without prejudice to the earlier cases under treatment if a careful selection be made. Of course, these cases can never be admitted to the exclusion of the more favorable ones, and it is only possible to accept them when they have a number of vacant beds, the aim being, as much as possible, to maintain the sanitarium as a curative and educative institution, and not palliative.

The records of the sanitarium show that at least 75 per cent. of incipient cases may be cured, while less than 15 per cent. of advanced cases, and barely 1 per cent. of far advanced cases, can be benefited to any extent.

EUTHANASIA.

Considerable interest has been taken in the subject of Euthanasia during the last few months in the United States, especially by the non-professional public. The *New York Medical Journal,* in its issue of February 17th, refers especially to the introduction of a certain bill into the Ohio Legislature, which would allow physicians to put an end to the lives of their patients under certain circumstances. It is said the bill was introduced at the behest of some cracked-brained sentimentalist.

The writer goes on to say: "The use of the word euthanasia in connection with such a barbarous and gruesome proposal is clearly a misnomer. Its correct designation would be 'legalized homicide,' and carried into effect it would constitute a reversion to the inhuman practices of savagery and the Draconian laws of the Spartans, which the civilized world has long since

outgrown. It is difficult to conceive of any physician so lost to the best traditions and plain teachings of his profession as to exercise such a repulsive privilege, even if there were any chance of a revolting measure of the kind becoming law.

"Euthanasia, rightly understood, however, has from time immemorial been practiced by the best physicians, and it is often the doctor's last merciful duty to his patient. It is right to alleviate with all the resources of our art the agony of a moribund sufferer, and in so doing the wise physician only follows the course of nature herself, who is generally kind enough to envelop in grateful oblivion the grand climacteric of death."

THE UNIVERSITY COMMISSION.

The following is a synopsis of the report of the commission respecting the University of Toronto, which was presented to the Government, April 6th, 1906.

The chief features of the report of the commission are briefly summarized by the commissioners themselves in the following conclusions:

"(1) The powers of the Crown in respect to the control and management of the university should be vested in a board of governors, chosen by the Lieutenant-Governor-in-Council, and subject by their method of appointment and by the regulation of their proceedings to the perpetual authority of the State.

"(2) The Senate, with its legislative and executive powers, and based upon the principle of representation of the federated and affiliated institutions and the faculties and graduates, should direct the academic interests of the university.

"(3) The School of Practical Science should be united with the university as its faculty of applied science and engineering, and the same intimate connection should, as far as practicable, apply to the relations of the faculty of medicine to the university.

"(4) University College should continue, as now con-

stituted, with a principal, faculty, council and registrar of its own, its administration being under the direction of its faculty council, subject to the control of the Governors, and appointments to the staff being made on the recommendation of the President of the university.

" (5) There should be created a council of the faculty of arts, composed of the faculties of all the arts colleges and representatives of the federated colleges, and a council for each faculty.

" (6) There should be created a caput, or advisory committee, having authority in certain matters of university discipline, which may act as advisory to the President.

" (7) The office of Chancellor should be retained, its occupant to be elected by the graduates, and to preside over convocation and confer degrees.

" (8) The office of Vice-Chancellor should no longer exist, its functions and duties being transferred, in certain respects, to the President.

" (9) The office of President should be clothed with additional powers, making its occupant, in fact as well as in name, the chief executive officer of the university."

Direct State Control Rejected.

After discussing the defects of the system of administration, as revealed in its history and present working, the commissioners assert that their object has not been to sever the university from the State, " with which it is inseparably associated, to the welfare and honor of both," but to change the administrative machinery, with a view to greater harmony and vitality. The situation now, they assert, is full of anomalies owing to the constitution having been drawn partly on British and partly on American models.

" We have no doubt that one of the principal contributory causes of this condition is the exceptional and unsatisfactory method by which the powers of the Crown in relation to the university have been exercised. No parallel to this method exists either in Great Britain or in North America. The State-owned and State-supported universities of Michigan, Wisconsin and other States of the American Union offer the closest examples for comparison. In these cases the State invariably delegates its power to trustees or regents. These trustees are either appointed by the Governor of the State or are elected by the people. To administer the affairs of a State

university by a political Government, occupied with different matters, constantly changing its party character, and gifted with no special talent for the management of universities, has not commended itself to a practical and progressive people. We see no ground for the belief that this plan of direct State control, rejected abroad and in ill-repute at home, can be made a success in this Province."

Board of Governors.

A board of fifteen governors is recommended, two of them, the Chancellor and President, being *ex-officio,* the others being appointed by the Government periodically so as to keep the personnel of the board in close touch with the Ministry of the day. The Chancellor, as at present, should be elected by the graduates. The proposal to have a number of the governors elected by the graduate body was given "long and careful consideration." It was rejected so as not to interfere with the responsibility of the Legislature.

The authority of the Crown should be provided for in three ways: "First, by the provision that of the fifteen governors all except the two *ex-officio* members should be appointed by and be removable at the pleasure of the Lieutenant-Governor-in-Council; second, that detailed statements of the expenditures and the investments should be annually furnished to the Government; and, third, by the provision that no expenditure involving any encroachment on the endowment should be made without the sanction of the Lieutenant-Governor-in-Council."

The commissioners recommend that the governors appoint the President, he being amenable in all respects to their supervision, and all his executive acts being ratified by them. He should be relieved of teaching duties. He should be *ex-officio* a member of the Board of Governors, but not the Chairman of the board. That officer ought to be named by the Government. He should, however, be Chairman of the Senate and a member, *ex-officio,* of every faculty in the university.

Power of Appointment.

The right to recommend should rest with the President, who as the academic head is the natural adviser of the governing body. Without his recommendation the responsibility of action would be divided. Appointments, therefore,

should be conditional upon his nomination. The President, under such circumstances, would necessarily consult with those distinctly qualified to give him advice. The fact that the Governors would hold him responsible for the character and fitness of the appointment would render him careful to exhaust every possible avenue of information. It would entail a constant search for promising men in every department of university work, and compel the President to have a knowledge of the standard of ability required in other universities which he would be free to apply at home. The spirit in which this duty would be discharged and the measure of success attending it would go far to indicate his own fitness. The highly important, and at times delicate, task of insuring the maintenance of the quality of the work done by the individual members of the staff is also best performed by the President.

Faculty Councils.

The report recommends that much of the business now done by the Senate be handed over to faculty councils, which would be the working bodies in academic matters, each faculty thus practically controlling its own affairs.

The creation of a caput or advisory committee consisting of the President and the heads of University College, Victoria, Trinity, Knox, St. Michael's and Wycliffe is suggested. It would have certain powers of discipline, and the President could, if he wished, consult it in matters of general university concern.

The Federated Bodies.

The commissioners say: "Our instructions enjoin us to have regard to those provisions of the Act of 1887, as recast by the Act of 1901, which affect the affiliated and federated bodies. Even in the absence of such instructions the obligation to regard these arrangements with an intelligent sympathy would naturally occur to anybody anxious to reach a conclusion just to all concerned."

School of Practical Science.

The union of the school and the university is recommended as of distinct advantage to both.

The Faculty of Medicine.

The report pays a high tribute to the members of the medical faculty for their self-sacrifice and zeal in medical teaching. The ultimate incorporation of the faculty into the university with the same relations as the other faculties to the governing body is recommended. In the meantime it is recommended that the university should at once pay the salaries of one professor of pathology and one professor of anatomy, as is common in the case of other universities, and should create chairs in hygiene and pharmacology. The President of the university should be *ex-officio* a member of the faculty, so that in future his recommendations as to medical appointments can be made after consultation with those best qualified to advise him.

Women Medical Students.

The commissioners announce that an arrangement has been reached by which in future women shall be admitted as students in the faculty of medicine. This is in lieu of the request made to them by the authorities of the Ontario Medical College for Women that a separate medical faculty should be created.

Ontario Agricultural College.

The commissioners, having visited the Guelph College, report upon the relations of that institution to the university. The success and efficiency of the college are referred to in warm terms. No change that would interfere with the control and responsibility of the Minister of Agriculture for the college is deemed necessary.

A State Veterinary College.

The commissioners recommend the purchase by the Province of the charter and rights of the Ontario Veterinary College and the setting up of a Provincial Veterinary College, affiliated to the university, but managed in the same way as the Guelph College, with the Minister of Agriculture as the supreme authority responsible to the Legislature.

New Departments of Work.

The report urges the appointment of a staff of at least three for instruction in forestry, and recommends that this course in the university be made to co-operate with the work done by

the Government for reforestation and preservation of the Crown's timber domain. The creation of a department of pedagogy is recommended. A faculty of law should be established without conflicting with the instruction now given by the Law Society. The household science department, which is to be given a handsome building by Mrs. Massey-Treble's generosity, should be adequately maintained. In art, music, research work and museum facilities the report recommends extension.

Points for the Students.

The commissioners make no reference to any past difficulties between the authorities and the students, but refer generally to the advisability of the relations between staff and students being "as close and friendly as possible." A system by which each professor would become the adviser of a certain number of students is approved of. Residences are warmly endorsed for their good influence, when rightly conducted, on the characters of the students. The appointment of a physical director, who is a graduate in medicine, is recommended. He would advise students in respect to sports and healthy exercise.

Trinity for Queen's Park.

The commissioners say that the relations between Trinity College and the university entailed special inquiry and consideration. The present arrangement, by which the Province pays the cost of duplicating lectures, and the advisability of Trinity removing to Queen's Park, are discussed. The commission came to no conclusion as to a basis of agreement, but, the report says, "though we were unable to reach a conclusion which would enable us to make a specific recommendation, the subject is one deserving of further consideration, and we recommend that it be taken up by the board of governors, and that a further effort be made to arrive at a basis of agreement more satisfactory than, in our opinion, is the one now existing.

The Financial Question.

The report deals exhaustively with the financial needs of the university, and declares that an annual sum of $275,000 is needed if the Province is to give adequate support to the claims of higher education. To provide this sum the succession duties are suggested as a source, the average annual revenue for the past six years from this tax amounting to $395,163. An endowment of land to the extent of at least a million acres is also recommended.

Sundry Considerations.

Research work in the university is specially dealt with, and the success of former students like Dr. Osler and Dr. Barker referred to. There has been a steady but moderate increase in the number of research students, but in medicine especially more could have been done with greater facilities. Want of equipment has been the primary obstacle in the field of applied science.

BRITISH MEDICAL ASSOCIATION.

Seventy-Fourth Annual Meeting, Toronto, August, 1906

Abstract of Memorandum for Officers of Sections.

Meetings of Sections.—The Sections will meet on Tuesday, Wednesday, Thursday and Friday, August 21st, 22nd, 23rd and 24th, at 9.30 a.m., adjourning at 12.30 noon each day.

Sectional Committee of Reference.—The President, Vice-Presidents and Secretaries of each Section will form a Committee of Reference, and shall exercise the power of inviting, accepting, declining, or postponing any paper, and of arranging the order in which accepted papers shall be read.

Guests.—Papers by guests will be presented upon invitation. If the Committee of Reference desires to invite persons to read papers in the Section who are not eligible to become members of the Association, their names should be submitted for the approval of the Council. If it is desired to ask any such persons to attend the meetings of the Section and take part in the discussions a general permission to issue such invitation should be obtained.

All papers read are the property of the British Medical Association, and may not be published elsewhere than in the "British Medical Journal" without special permission.

Discussions.

Secretaries are requested to communicate to the General Secretary á preliminary statement of the arrangements made for the discussions in the Section to be laid before the Council at the earliest possible moment. This should consist of a statement of the subjects selected, together with the names, if possible, of the gentlemen who have undertaken to open the discussions.

Papers.

The offer of a paper should not be accepted on its title alone, and save under exceptional circumstances no paper should be accepted for reading until it has been sent to the secretaries.

The Secretaries are requested to communicate to the General Secretary of the Association, 429 Strand, London, W.C., not later than June 15th, a complete list of papers approved and accepted for reading.

It is suggested that the secretaries resident in the United Kingdom should collect papers from members on this side, and the secretaries in Canada should deal with all papers in the Dominion and the United States.

Only titles of papers which have been accepted, and which may be reasonably expected to be read, should be included in the programme of sectional proceedings.

Offers of papers ought not to be accepted in excess of the number likely to be read. Failure to observe this condition leads to many inconveniences, and gives rise to complaints of unfair preference.

Report in the "British Medical Journal."

A report of the actual proceedings of the Section will be published in the *British Medical Journal,* and in any communication addressed to persons who offer papers to be read in a Section two things should be made quite clear:

1. That papers read are the property of the British Medical Association, and cannot be published elsewhere than in the *British Medical Journal* without special permission.

2. That the authors of papers not read have no claim for the publication of their papers in the *British Medical Journal. Papers cannot be taken as read.* If they are not read they form no part of the proceedings of the Section.

Secretaries are requested to co-operate in preparing the report of the proceedings of their Section for publication in the *British Medical Journal* with the reporter of the *British Medical Journal* appointed to the Section, and to hand to him all matters for publication for transmission to the editor of the *British Medical Journal,* 2 Agar Street, Strand, London, W.C.

The attention of authors should be particularly directed to the time limit (see below), and the text of papers submitted for publication in the *British Medical Journal* as part of the report of the Section should represent what is actually read to the Section.

It is important that each author should hand the text of his paper in proper form for publication to one of the secretaries of the Section immediately after it is read. It should be made clear that neglect to comply with this request may result in the omission of the paper in question from the proceedings of the Section subsequently published in the *British Medical Journal.*

Time Limit.—The attention of the Council of the Association has been called to the non-observance by readers of papers of the rule as to the time limit, which is as follows: "No paper must exceed fifteen minutes in reading, and no subsequent speech must exceed ten minutes." The attention of Presidents and Secretaries of Sections is particularly requested to this rule.

Honorary Local Secretaries,
DR. F. N. G. STARR,
DR. D. J. GIBB WISHART,
PROFESSOR J. J. MACKENZIE,
The Medical Laboratories, University of Toronto, Toronto, Ont.

NOTES.

Queen's Graduates.

The results of the Medical Department examinations at Queen's College, Kingston, are as follows: There are forty-seven graduates: A. E. Baker, Black Falls, Sask.; W. H. Ballantyne, Kingston; J. A. Barnes, Kingston, Jamaica; A. M. Bell, Moscow; E. Bolton, Phillipsville; F. J. Brandock, Northport, N.S.; H. Cochrane, Sudbury; G. L. Cockburn, Sturgeon Falls; C. B. Dean, Bridgetown, Barbadoes; D. G. Dingwall, W. F. Gavin, Lancaster; G. D. Gordon, C. W. Graham, B.A., Kingston; J. Johnston, B.A., Combermere; W. G. Leadley, C. A. Lawlor, Kingston; S. L. Lucas, Kingston, Jamaica; F. E. Lowe, Adelphi, Jamaica; S. McCallum, M.A., Brewer's Mills; J. P. McCormick, Ottawa; D. J. McDonald, Whycocomagh, N.S.; A. G. McKinley, Chapelton, Jamaica; D. McLellan, Forrester's Falls; F. R. Nicoll, B.A., Kingston; F. J. O'Connor, Long Point; W. M. R. Palmer, Northcote; R. K. Paterson, Renfrew; W. E. Patterson, Newburgh; W. R. Patterson, L. L. Plafair, C. A. Publow, Kingston; H. O. Reddan, Ernestown; J. Reid, Renfrew; A. D. C. Robb, Nashville, Tenn.; B. A. Sandwith, Whitestable, Eng.; F. F. Saunders, Rhinebeck, N.Y.; S. S. Shannon, Kingston; S. H. Smith, Chambers; J. B. Snyder,

Lancaster; W. E. Spankie, Wolfe Island; J. R. Stewart, B.A., Waba; E. M. Sutherland, B.Sc., B. C. Sutherland, Montreal; W. J. Taugher, Beachburg; C. P. Templeton, Napanee; J. J. Wade, Balderson; D. M. Young, Bristol, Que.

House Surgeons of Toronto General Hospital.

The former and present resident physicians and surgeons of the Toronto General Hospital have formed an association, which it is expected will meet annually. A few weeks ago a temporary committee was formed, having Dr. P. E. Doolittle as Chairman, and Dr. F. Winnett, Secretary, to frame the constitution and by-laws, and arrange for an early meeting. The first meeting was held on the evening of May 9th, when a banquet was given in the King Edward Hotel, Toronto. The following officers were elected: Honorary President, Dr. C. O'Reilly; President, Dr. R. B. Nevitt; Vice-Presidents, Drs. W. P. Caven, Jno. McAlpine, James Third, R. M. Hilary, A. Ardagh, T. Middlebro, J. H. Mullin, Geo. Acheson, Don. Armour, and L. Barker; Secretary, Dr. J. N. E. Brown; Council, Drs. J. F. W. Ross, H. A. Bruce, P. E. Doolittle, W. N. Barnhart, and W. B. Hendry.

Dr. Nevitt, the newly-elected President, acted as Chairman at the banquet. Among others present were: Drs. H. J. Hamilton, C. Trow, M. McFarlane, G. B. Smith, C. Campbell, E. D. Carder, S. Johnston, G. Cleland, H. Parsons, C. Temple, F. Winnett, F. Fenton, G. Boyd, D. W. Anderson, A. B. Wright, and several others.

It is expected that the next meeting of the association will be held on the 25th of August next, immediately after the meeting of the British Medical Association.

An International Committee composed of the following surgeons: W. W. Keen, Philadelphia; W. S. Halsted, Baltimore; J. B. Murphy, Chicago; F. Kammerer, New York, has been formed to solicit and receive contributions for a monument in honor of the late distinguished surgeon, Johannes Von Mukulicz-Radecki, of Breslau, Germany, from the profession of the United States and Canada. The committee in appealing tells us that "an opportunity is afforded, not merely to testify of our sympathy and affection for Prof. Von Mukulicz-Radecki, but also to express our appreciation of Germany's great achievements in surgery." Contributions may be sent to any member of the committee.

New Physics Building.

The Trustees of the University of Toronto have decided to erect a fine modern physics laboratory, equipped with the latest appliances. The building will go on the west side of the oval, south of Convocation Hall, and back from the avenue line a sufficient distance to give the appearance of a wide sweep to the oval.

We desire to congratulate the *Maritime Medical News,* which is now published by the Imperial Publishing Company, on its improved appearance in its new dress.

We learn from the *Montreal Medical Journal* that Dr. J. W. Stirling has been appointed Professor of Ophthalmology in the Medical Faculty of McGill University, and Ophthalmic Surgeon to the Royal Victoria Hospital, in the place of the late Dr. Buller. As a result the position of Ophthalmologist at the Montreal General Hospital, previously held by Dr. Stirling, became vacant.

The Montreal *Journal* tells us that there were three candidates for this position. Dr. Kerry had served the hospital faithfully for eight years. Dr. McKee had a brilliant record as a student of scientific work under Dr. Buller, and had further qualified himself by post-graduate study abroad. Dr. Geo. H. Mathewson had years of faithful service to his credit in the Western Hospital, Montreal. He is a graduate in Medicine and Arts at McGill; he was assistant for four years in the Royal Victoria Hospital; he has just returned from a period of study in Vienna. Dr. Mathewson received the appointment.

Personals.

Dr. L. A. C. Panton (Tor. '04) is practicing in Chicago.

Sir William Hickson, of Montreal, visited Toronto early in April.

Dr. Thomas Cullen, of Baltimore, sailed for Holland, March 15th.

Dr. J. J. Hamilton (Tor. '05) is now at the Lakeside Hospital, Chicago.

Dr. George D. Porter, after a visit to Italy, returned to Toronto, April 19th.

Dr. W. Harley Smith has removed from Spadina Avenue to 57 Harbord Street.

Dr. Edmund E. King, of Toronto, sails from New York for Liverpool, May 4th.

Dr. A. H. Garratt, of Toronto, will sail from Montreal for Liverpool, June 2nd.

Dr. F. A. Clarkson, of Toronto, sailed from Portland for Liverpool, April 8th.

Dr. J. Orlando Orr sailed for England, March 20th, and returned to Toronto, April 22nd.

Dr. J. H. C. Willoughby, of Saskatoon, spent a portion of the winter and spring in Toronto.

Dr. Jas. A. Robertson, of Stratford, and Dr. A. H. Wright, of Toronto, will sail from New York for Naples, May 10th.

Dr. Colin A. Campbell has opened an office for ophthalmic and aural practice at 55 College Street, Toronto.

Dr. Sam. Johnston, of Toronto, went to New York, April 12th, to spend the Easter holidays and visit certain hospitals.

Dr. A. M. Rosebrugh has removed his office from Shuter Street to his residence, 76 Prince Arthur Avenue, near St. George Street, Toronto.

Dr. W. Beattie Nesbitt, formerly M.P.P. for North Toronto, has resigned his seat in the Provincial Legislature, and is now Registrar for West Toronto.

Dr. Geo. McDonagh, after a trip to California and the Sandwich Islands, returned to his home in Toronto, and resumed practice, April 10th.

Dr. Charles O'Reilly, after a visit of nine months to England, returned to Toronto, March 27, and is now living in his new residence, 52 College Street.

Dr. E. B. O'Reilly, of Hamilton, went to Johns Hopkins, Baltimore, March 1st. After devoting himself to surgery and pathology for one month, he went to the Continent and is now working with Dr. Kocher in Berne, Switzerland.

Major Francis L. Vaux, M.D. (Trin. '85) has gone into the Medical Army Service. He left his home in Ottawa for Toronto, and spent some time at the Stanley Barracks. He is likely to be permanently located at either Toronto or Halifax.

Dr. Clarence W. Field (Tor. '05), who has been pursuing a post-graduate course in Great Britain, recently obtained the triple qualification of Edinburgh and Glasgow. He is now engaged at work in London, and will shortly go to Paris and Vienna.

Dr. E. D. Carder (Tor. '99), after spending some years on a C. P. R. steamship, went to London, and engaged in post-graduate work for about two years. He visited his home in Toronto in the latter part of March, and left April 22nd for Vancouver, B.C., where he expects to practice.

The following have been appointed coroners: Dr. Frederick Winnett, for Toronto; Dr. James I. Cassidy, of Moorefield, for Wellington County; Dr. Robt. J. Gardiner, of Seely's Bay, for Frontenac, Leeds and Grenville Counties; Dr. W. J. M. Armstrong, of Mitchell, for Perth; Dr. Jos. M. Tweedale, of Port Burwell, for Elgin; Dr. Hugh Lang, of Granton, for Middlesex; Dr. Alex. Hamilton, for Toronto; Dr. Jas. H. McGarry, of Niagara Falls, for Welland; Dr. Alf. E. Morgan, of Adelaide, for Middlesex; Dr. Geo. W. Harcourt, of Powassan, for Parry Sound.

Dr. Allen Baines, of Toronto, spent the greater part of the month of March in Jamaica. On returning from New York to Toronto, March 31st, he suffered from hepatic colic, which was followed by a serious cholecystitis. On the evening of April 4th he had a severe rigor, followed by a high temperature and rapid pulse. For four days his condition was considered somewhat serious. On April 7th his condition was improved, and he steadily gained from day to day until complete recovery took place about April 14th.

Obituary.

W. H. KYLE, M.D.

Dr. Kyle, who for a time practiced in Detroit, died at Chesley, Ont., April 7th, aged 30. He was a graduate of Trinity Medical College, Toronto.

JOHN BRUCE MacCALLUM B.A., M.D.

Dr. J. B. MacCallum, one of the brightest of our young Canadians in the United States, died in San Francisco, April 6th, of tuberculosis. He was born in Dunnville, Ont., in 1876, graduated B.A., University of Toronto, in 1896, and M.D., Johns Hopkins University, Baltimore, in 1900. He did post-graduate work in Leipzig in 1901; was appointed Assistant in Anatomy, Johns Hopkins, in 1902, and became Associate Professor of Physiology in the University of California in 1903.

JOHN COPLIN STINSON, M.D.

Dr. J. C. Stinson, a very successful young practitioner of San Francisco, was killed in the earthquake catastrophe on the morning of April 18th. He was born in Brantford, Ont.; received his early education in that city; his medical education in Trinity Medical College, Toronto, and his degree in medicine from the University of Trinity College in 1893.

ALEX. THOMPSON, M.D.

The many friends of Dr. A. Thompson, of Strathroy, were greatly shocked on hearing of his sudden death, March 31st. Although not feeling well he went his usual rounds during the day attending to his practice. During the night he was suddenly seized with a "sinking spell" and died in a short time. He graduated, M.D., from the University of New York in 1861. He was sixty-nine years of age, and was for many years one of the best known and most highly respected physicians in Western Ontario.

JOHN WESLEY MOKE, M.B.

We have to announce with deep regret the death of Dr. J. W. Moke, which occurred April 10th. Dr. Moke was 31 years of age and unmarried. He was graduated from University of Toronto in 1901.

MARK DUGALD STARK, M.D., M.R.C.S.E., L.R.C.P. Edin.

Dr. M. D. Stark, of Oxford, England, died at Torquay, Devonshire, March 6th. He received his preliminary education at Dundas and Galt, and graduated from Trinity University in 1875. After he received his British qualifications he was appointed a surgeon on a steamer going from London to Egypt, India and China. On retiring from the steamship service he practiced for a short time in Berkshire, and then went to Oxford, where he formed a partnership with Mr. Sankey, surgeon.

WILLIAM JOHN DOUGLAS, M.D.

Dr. W. J. Douglas, a prominent physician of Cobourg, died March 29th, aged fifty-three years. His health had been failing for some years, but he was able to attend to a large portion of his practice.

He left his office about midday to visit a patient in the country, and, contrary to his usual custom, was driving alone. Shortly after leaving his residence he was seen to lean out of his buggy, and then fall to the ground. Two men at once went to his assistance. He spoke once in answer to a question, but died in a very few minutes thereafter.

Mr. Howard Primrose, father of Dr. Alexander Primrose, of Toronto, died at his home in Pictou, Nova Scotia, April 11th, aged 74.

We join Dr. H. H. Moorhouse's many friends in expressing our sympathy for him in his sad bereavement. His son, Mr. A. C. Moorhouse, a third year student of Trinity University, was drowned in Lake Ontario, near Mimico Point, while canoeing, April 7th.

Selections.

Influence of Light in the Production of Cancer. J. N. HYDE, (*American Journal Medical Sciences*, January, 1906).

The skin of the human body, in a certain proportion of individuals, and in those only, is hypersensitive to the action of the actinic rays of the spectrum. This hypersensitiveness may be exhibited in the production of either hyperemia, pigmentation, telangiectasis, atrophy, hyperkeratosis, or cancerosis of the skin; or by all, at times, in a determined order of succession. In the form of childhood cancerosis known as xeroderma pigmentosum, the pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin resulting from exposure to rays of light are exhibited early in life, instances of this disorder being exceedingly rare. Pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin occur in adults much more frequently than in childhood, reaction to the play of actinic rays of light upon the surface being chiefly determined after the middle periods of life have been reached. Physiological pigmentation of the skin in the colored races seems to furnish relative immunity against cancerosis of that organ. The colored races apparently suffer less than the whites from cancer of other organs than the skin. This relative immunity may be due to the protection from actinic rays of light furnished by the pigment of the integument.—*Monthly Cyclopedia of Practical Medicine.*

Arteriosclerosis: Treatment. MANFRED FRÆNKEL (*Wiener klinische Rundschau*, Nos. 29 and 30, 1905; *American Journal of Medical Sciences*, January, 1906).

The writer considers that iodine is not indicated in this condition, since its only effect is to lessen the tension on the vascular walls. A rational treatment must be one which acts favorably on the metabolism of the vessel walls, strengthens the vasomotor system and lessens the blood pressure. Trunecek's serum has given excellent results, which are due to the action of the salts contained in it; the dyspnea becomes less, owing to the increased alkalinity of the blood, and the sodium salts act directly upon the heart and the vascular epithelium. The use of this serum, however, is painful and the daily injections are wearing upon both physician and patient; as a prophylactic it has the disadvantage that the patient objects to a painful and tedious treatment for an in-

cipient disease. It has been found that the serum acts as well when given by mouth as when administered subcutaneously, consequently the author advises the use of antisclerosin, which consists of the salts contained in the serum. The first group of twenty-five patients treated by the author with this compound included advanced cases. In many the vessels were distinctly hardened and elongated. The observations extended over about one year. In nineteen cases the subjective and objective symptoms were relieved for different periods or disappeared for months; in the six others the symptoms were relieved slowly, disappeared for a short time only, and recurred when the drug was stopped.

The author concludes that the chief field for antisclerosin is prophylaxis at the earliest appearance of the symptoms which indicate arteriosclerosis. Among these may be included a peculiar indefinable sensation in the precordium, slight dyspnea, especially on walking, dizziness, temporal throbbing, going to sleep of the extremities, tinnitus, visual disturbances without ocular lesion and indigestion. The patient's age, somewhat tense and hard pulse, plethora, gout, or rheumatism substantiate the diagnosis. Such symptoms may be removed by the use of antisclerosin. The drug should be given until the symptoms disappear, and intermitted for two or three weeks before resuming. If the symptoms recur, a renewal of the treatment is indicated. No unpleasant effects have been observed from the administration of this substance.—*Monthly Cyclopedia of Practical Medicine.*

Cancer of the Breast. W. Osler (*British Medical Journal*, January 6, 1906).

It must be borne in mind that extensive general lesions may be associated with a small latent carcinoma. In two-thirds of the cases both breasts are involved. Direct extension through the chest-walls to the pleura, with secondary involvement of the lymphatic glands, more rarely disease of the lung itself, is one of the most common of the sequelæ of carcinoma of the breast. Pleurisy, with effusion, may come on insidiously with the only symptom an increasing shortness of breath. In other instances there are severe pains, with signs of involvement of the pleura itself by extension. It is not always easy to say whether the pleurisy is of a cancerous nature or not. Glandular metastases within the thorax are very common and associated with all the distressing pressure symptoms of tumor.

There may be no local recurrence and no physical signs, though, as a rule, the mediastinal tissues are involved and there is flatness on percussion, and not infrequently disease of the sternum itself. The glands above the clavicle may be enlarged. Even a mediastinal growth, with penetration of the manubrium, may undergo involution. Carcinoma of the lungs secondary to that of the breast is very infrequent. The peritoneum may be involved by direct extension, and recurring carcinomatous ascites is not uncommon. The breast tumor may be latent in these cases, or concealed by the patient. Metastasis to the liver is more frequent than to any other organ, but it is more commonly of post-mortem than of clinical interest. The liver becomes enlarged, irregular, nodular and the patient is deeply jaundiced, with all the features of secondary carcinoma. Cerebral symptoms may be caused either by metastasis to the bones of the skull or the brain itself. The most common and the most serious, as entailing a maximum of suffering, are the lesions of the spine. Such metastases occur with great frequency, and they are more common in the atrophic form of scirrhus of the breast. Kyphosis is rare, and any part of the spine may be involved. The secondary growths may become sclerotic and shrink with a diminution in the pressure symptoms. The symptoms usually occur in two stages. In the first or neuralgic stage, definite pains in the back begin to appear from two months to two years after the removal of the cancer. There is general anesthesia, and the patients are often thought to be neurasthenic. An attack of shingles is a distressing and not uncommon complication of this stage. The pains gradually become more severe and may occur in the most agonizing crisis. In most cases the second or paralytic stage is reached, pressure paraplegia, usually of the spastic type. Cramps in the muscles are common, and finally there is the well-known picture of paraplegia dolorosa. Spontaneous involution of the secondary tumors is one of the most remarkable features of carcinoma. Metastases to the bones are not infrequent. The bones of the hands and feet are often involved. And, finally, the author urges that in the hopeless cases morphine, enough morphine, affords the only possible relief.—*Monthly Cyclopædia of Practical Medicine.*

Treatment of Shock.

In the treatment of shock, Keen has practically given up the use of strychnine, and has substituted adrenalin for it.

Montgomery does not believe strychnine to be the best drug for continued use. He says that after the preliminary dose of strychnine better results can be secured from the administration of some preparation of aseptic ergot. Next to intravenous injection of salt solution, he has learned to rely on ergot as the most effective agent in shock. Martin says that the only drug which seems to have a distinct action in desperate cases is adrenalin chloride. This, to be effective, must be given intravenously in extreme dilution (1 to 20,000 normal salt solution) and allowed to flow slowly into a vein. It is transitory in its effects, however, and the injection may have to be repeated. This may be done for from twelve to twenty-four hours through a canula left in the vein.

Da Costa favors adrenalin administered intravenously with salt solution, and given very slowly and gradually for a considerable time. Rodman says that in mild cases due to anesthesia and the operation combined, nothing more is required than oxygen, a decided lowering of the head, and artificial heat. In cases of moderate severity, in which the temperature is from one to two degrees below normal, but unaccompanied with great cardiac and respiratory involvement, enemata of hot coffee and whisky or enteroclysis of hot saline solution, in addition to position and artificial heat, will be all that is necessary. If in addition to a cold, clammy skin, and temperature 96 deg. F. or below, there is much pain, a hypodermic of 1-6 grain of morphine with 1-150 of atropin is added to the above. Hypodermoclysis may be substituted for, or used in conjunction with, enteroclysis. If the pulse is short, frequent, and jerky, above 130, and of poor volume, intravenous infusion, preferably with adrenalin chloride, is called for; one-half pint to a pint, frequently given, is better than three or more pints at once. Laplace thinks that strychnine as a cardiac tonic is of the utmost value, but that it fails in its purpose if the circulation be at the time too weak to have it produce a stimulating effect on the brain. It is, however, the best agent for reducing shock to a minimum during an operative procedure. —*Monthly Cyclopedia of Practical Medicine.*

Scopolamine-Morphine Anesthesia. H. J. WHITACRE (*Surgery Gynecology and Obstetrics*, February, 1906).

From observations made in forty cases of anesthesia induced by this method, upon animal experimentation, and upon a review of all deaths that have been reported in the literature up to the present time, the writer concludes that scopolamine-

morphine narcosis is not devoid of danger, and its use alone for surgical narcosis is not justifiable, and, in the writer's experience, is not practicable. A single dose two hours before operation lessens the discomforts attendant upon the operative procedure to a high degree, and may obtain a definite place in surgical practice. Four deaths have occurred in a series of 2,400 collected cases, which have been so definitely related to the use of this method of narcosis that they are probably scopolamine deaths. This, however, in the absence of autopsy demonstration. These deaths have been reported as occurring with a type picture of alkaloid poisoning, and heart failure has been given as the direct cause of death (Landeau). A fatty degeneration of the liver and kidney has been produced by repeated doses of scopolamine alone, and of the scopolamine-morphine combination, in animals. This method of producing or assisting narcosis cannot yet be recommended for use in general practice, in spite of the great advantage it seems to offer.—*Monthly Cyclopedia of Practical Medicine.*

Opium in Heart Disease. J. H. MUSSER (*American Journal Medical Sciences*, January, 1906).

According to the author, there are sound clinical reasons for the belief that opium is a tonic in cardiac debility. In cases of weak heart after exhausting disease, after prolonged mental and physical pain, and without organic lesion of valves or muscle, opium is of advantage. In cases of failing compensation, with the onset of stasis, the heart is supported, especially if the unfortunate possessor is an impressionable subject who frets and fumes because of the ordinary irritations of life. In the gradual engorgements from myocardial dilatation, in chronic parenchymatous nephritis, and in arteriosclerosis it is of value. If the patient is hypochondriacal or hypersensitive, the second daily dose of opium invites sleep and induces a feeling of well-being. The dyspnea of myocarditis is relieved or prevented by continuous small doses of morphine for a very long time. The author has seen a form or stage of myocarditis with restlessness, Cheyne-Stokes breathing, dyspnea, and rapid pulse helped by continuous doses of opium. The tachycardia of Graves's disease is relieved, and in three of his cases it appeared to contribute to the cure of the disease. In nervous and irritable patients opium is almost necessary to induce comfort.—*Monthly Cyclopedia of Practical Medicine.*

Miscellaneous.

A Medical Reverie.

Very doubtful just how to begin it,
But think I could cover a page
If the thoughts that are crowding each minute,
Would each only one sentence engage.
The wonderful treatment of cancer
So "puffed" off by a Frenchman of late
Has failed in its trial to answer,
So hundreds are left to their fate.
The plague is found due to "Bacteria"!
And rats the Bacilli convey,
So don't let the vermin come near you.
You'll find them much better away.
The open air treatment of Phthisis
Though all very well for a time
Is no better than feeding on ices
(Of course this is meant to make rhyme).
The surgeon begins at your tonsils
"Adenoids" next call for his aid,
He'll short-circuit all your intestines,
He'll find your "Appendix" decayed.
All honor and praise for that button,
Chicago's (connect-a-gut) fame,
Though not often used by Bland Sutton
The appliance itself is not to blame.
You may part with "Appendix" and "Prostate,"
And feel you have gone through the wars,
The tatter you'll know when you've lost it,
"A vacuum nature abhors."
When you've bidden good bye to your "giblets,"
And at last have to bow to your fate!
At least there is one ray of comfort,
There won't be so much to cremate!—A. D.

Renal Growths.

The following quotation was made from Dr. Kelynack's work on *Renal Growths,* as supporting the possibility of a gradation series of renal growths:

No very definite line can be drawn between the various forms of adenomatous growth. They shade off one into another. Some, especially the "trabecular cystomata," as they have been termed, with papillary ingrowths, are particularly prone to take on indefinite growth and to manifest malignant characters. This seems to have been recognized by several pathologists.

Delafield has pointed out that sometimes adenomata behave like malignant growths, especially those forms which are very vascular. As he well says, "The adenomata, which run a malignant course with the formation of metastatic tumors, are often called carcinomata." Ricker also met with a malignant form of trabecular cystoma. It is of very great practical importance to remember that, although from their microscopical characters they might be considered simple, yet frequently they prove malignant.—*British Med. Jour.*

Experimental Arteriosclerosis.

The subject of arteriosclerosis is being investigated from various points of view by many workers. The experimenters are endeavoring to produce changes in the arteries of the lower animals by injecting and feeding them with various substances, thus attempting to solve the problem of the pathogenesis of the disease. It must be remembered that arteriosclerosis develops slowly in the human being. Let us suppose that alcohol is the cause of it; the condition follows the repeated ingestion of various doses day after day for years. Let us suppose that high arterial pressure due to muscular exertion is the cause of it; this factor also is operative day after day for years before the pathological changes are so well advanced that they produce symptoms and morbid changes. We do not make these statements to discourage investigation, but merely to remind the investigator that he is dealing with the problem experimentally under different conditions from those that occur in human pathology.

The most recent experimental work has been done by Pearce and Stanton (*Journal of Experimental Medicine*, January). Rabbits were injected in the veins of the ear with repeated doses of a one to one thousand solution of adrenalin. Usually three minims were given every other day, although in some

experiments the dose was gradually increased. The early injections sometimes resulted in death from acute dilatation of the heart and pulmonary edema. In those animals which survived the early injections by the development of a certain amount of immunity, the doses were increased gradually, and they were killed after periods varying from a few days to eight weeks and a half. Ten animals were chloroformed, and the gross lesions were found in the aortas of six. The earliest change in the vessel wall which is apparent to the naked eye consists of a faint longitudinal or irregular grayish streaking of the intima without thickening. Later, irregular isolated or confluent areas of a pearly gray color are found, almost all of which are calcified. Still later, the aorta is more or less distorted, rigid, and nonelastic; but distinct ulceration with atheroma is not readily demonstrable. Diffuse calcification is not infrequent and small aneurysmal dilatations may be present. Microscopically, primary degenerative lesions are well advanced by the end of the third week, and one or two weeks later advanced calcification may be demonstrated. The destruction of the muscle fibres is the older and probably the primary lesion. In the late lesions, when small aneurysms are found, the elastica is so completely destroyed that only an indistinct mass of fractured granular and fused fibres remains. In two animals which died on the fifth and the ninth days of the experiments, respectively, small longitudinal or occasional irregular, finely granular foci of degeneration were seen in the media of the aorta. In these areas there were no nuclei visible, and the muscle fibres were transformed into a finely granular, almost hyaline material.

There appears to be one discrepancy in the conclusions of the authors. They distinctly state that the lesion "of the muscle fibre is the older, and therefore in all probability, the primary lesion." Later they point out "the strong support afforded Thoma's views, that the primary lesion of arteriosclerosis occurs in the media and is essentially the result of changes in the elastica, and that the alterations in the intima constitute a repair process, the object of which is to compensate for the weakened media and the widened lumen." They probably mean that physiologial disturbances of the elastica result in anatomical changes in the muscle, but the inference is not clear. The experimenters have not succeeded in reproducing arteriosclerosis as seen in man, and this they freely admit. It must be allowed, however, that the resemblance is very close.—*New York Med. Jour.*

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Original Communications.

INTERMITTENT GASTROSUCCORRHEA.

SYNONYMS.—Gastroxynsis (Rossbach); Gastrosuccorrhea Continua periodica (Reichmann); Reichmann's Disease; Paroxysmal Hyperchylia Gastrica.

BY GRAHAM CHAMBERS, TORONTO.

This is a somewhat rare affection of the stomach, which is characterized by attacks of excessive secretion of gastric juice, associated with nausea, vomiting, and pain in the region of the stomach. Headache is also a frequent symptom. In the interims between the attacks the patient is usually in perfect health.

Intermittent gastrosuccorrhea is closely related to migraine, periodic vomiting of Von Leyden, and cyclic vomiting in children. It also bears relationship to chronic gastrosuccor rhea, acute attacks or exacerbations of hyperchlorhydria, and the gastric crises observed in tabes dorsalis.

Etiology.—The disease is usually observed in nervous persons who are very excitable and do much mental work. Most of the recorded cases have been in the male sex. Excessive eating, or the ingestion of irritating foods, may precipitate an attack. The abuse of tobacco is occasionally a causative factor.

Symptoms.—The attack usually begins suddenly in the early morning hours. On the day previous the patient is generally in good health. The first symptoms that appear are acid eructations, heart-burn, nausea, discomfort and pain in the region of the stomach. The pain increases in severity and is usually of a spasmodic character, and may be so severe as to

cause collapse. In a short time vomiting occurs. This gives relief for a period, but soon the symptoms recur. The first vomitus generally contains particles of food, and is rich in both acid and ferments. The following vomiti are frequently yellowish or greenish yellow. This is due, no doubt, to regurgitation of bile taking place more readily when the stomach is empty. Analyses show that the ejected gastric contents still contain hydrochloric acid and ferments. This is an important character, as it shows that the secretion is continuous, even in the absence of food, and distinguishes the disease from hyperchlorhydria. Headache is usually present at some time during the attack. In some cases it precedes the gastric symptoms, as is usually the case in migraine. There is generally thirst, but the appetite is lost. The drinking of much water increases the vomiting, but the latter continues even if no water be drunk.

During the attack there is more or less collapse. The abdomen is commonly sunken. The patient looks pale; his pulse is as a rule small and frequent and the extremities cold.

The course of each attack varies from a few hours to two or three days. The symptoms disappear suddenly, and are immediately followed by an interval varying from a week to many months in which there is good health.

Diagnosis.—Intermittent gastrosuccorrhea must be differentiated from chronic gastrosuccorrhea, hyperchlorhydria, migraine, periodic vomiting, cyclic vomiting, and gastric crises of tabes dorsalis. The only distinctive sign of intermittent gastrosuccorrhea is periodic continuous flow of gastric juice. All other symptoms, such as vomiting, gastric pain and headache, may be manifestations of many other gastric affections.

In chronic gastrosuccorrhea the excessive secretion is continuous. From time to time, especially in cases accompanied by ulceration of the gastric mucosa, exacerbations of the hypersecretion may occur. These may be characterized by headache, nausea, vomiting, and all the other sypmptoms of an attack of intermittent gastrosuccorrhea. However, between these attacks the stomach is never empty. In the morning, or after a period of fasting, gastric juice can be syphoned from the stomach. The hypersecretion may be remittent, but never intermittent.

Hyperchlorhydria is characterized by an excessive secretion of hydrochloric acid and usually of gastric ferments during the period of digestion. The symptoms are digestive, and

when the stomach contains no ingesta there is no secretion of gastric juice. In hyperchlorhydria attacks of vomiting may occur, but are not so common as in intermittent gastrosuccorrhea.

Migraine is an affection which presents a symptom complex similar to that of intermittent gastrosuccorrhea. In both headache, nausea and vomiting may occur periodically. However, in migraine headache, frequently unilateral, is the essential symptom. It appears early in an attack, although generally preceded by prodromal symptoms such as spots before the eyes, vertigo, tinnitus, etc. Nausea and vomiting are as a rule later symptoms. The condition of gastric secretion is variable. In some cases the vomitus is highly acid, due to excessive secretion of hydrochloric acid. Continuous hypersecretion may also be present, and, if so, the gastric symptoms take a more prominent patr in the disease picture. Migraine with hypersecretion is very closely allied to intermittent gastrosuccorrhea.

Periodic vomiting as described by Von Leyden usually appears suddenly with nausea and vomiting. The vomitus is not hyperacid, and the gastric secretion is not continuous. Headache is frequent, but gastric pain is usually absent.

Cyclic vomiting in children has many points of resemblance to intermittent gastrosuccorrhea. In both there may be hypersecretion, nausea, vomiting, headache, and depression. In both the attacks may occur periodically. In some cases, however, it is claimed that hypersecretion is not present. This character would distinguish it from gastrosuccorrhea.

Gastric crises is a symptom complex observed in tabes dorsalis and rarely in other spinal diseases. The symptoms of the crises resemble those of intermittent gastrosuccorrhea. Hypersecretion may be present, but is not a constant sign. The recognition of the primary disease suggests the diagnosis of the gastric affection.

Treatment.—The treatment of an attack should be initiated by cleansing as completely as possible the alimentary tract. With this purpose in view the stomach should be thoroughly washed out with a weak solution of bicarbonate of sodium. If the patient will not consent to the lavage, or for some reason it is contraindicated, then hot water is to be freely and repeatedly administered. The drinking of the hot water is usually followed by vomiting, which tends to cleanse the stomach and in some cases to abort an attack. As soon as the stomach has been

thoroughly cleansed it is to be given rest. No food is to be eaten, and water, except in small quantities, is not to be drunk. Thirst, if severe, may be relieved by the swallowing of pellets of ice, or by an enema of normal saline solution. The condition of the bowels usually requires attention. If constipation is present, benefit may be derived from the administration of calomel, or by an enema of magnesium sulphate in water. When vomiting has ceased for two or three hours we may look upon the condition as improved and commence the administration of food, at first liquid and in small quantities at a time; and as further improvement occurs in larger amounts.

The pain and distress in the region of the stomach may be mitigated by warm and moist compresses applied to the abdomen. Phenacetin combined with caffeine may be given for the relief of headache. Occasionally the gastric pain or headache is so severe that morphine is required to give relief.

In regard to the treatment of the cases between the attacks the principal indication is to remove the cause of the disease. If there is any perversion of gastric secretion or gastric motility, measures should be instituted for their correction. A slight degree of hydrochlorhydria or continuous hypersecretion is not an uncommon phenomenon in this affection. We should, therefore, be on the outlook for these preversions. If, from the history of the case, the attacks appeared to have been precipitated by the use of tobacco, or excesses in eating or drinking, etc., these errors in living should be interdicted. If excessive mental work appears to be a causative factor, the patient should be directed to alter his manner of living in order that he may gain more mental rest. The exhibition of bromide of strontium is frequently benefited in this type of case.

Clinical History of a Case.

J. K., aged 23, electrician, consulted me in December, 1904, on account of periodic attacks of vomiting from which he had suffered during the previous three years. Family history shows no predisposition to nervous affections. Patient is an inveterate cigarette smoker. He works hard (mentally) and is prone to worry about unimportant matters. His general habits are good. Prior to the date (1901) at which he first began to suffer from attacks of vomiting he had fairly good health, although suffering occasionally from headache, acid belching, and slight pressure in the region of the stomach after eating.

Since he was seventeen years of age has suffered from constipation. The present condition of the patient is as follows: Complains of constipation, drowsiness and slight gastric distress after eating; appetite good; tongue clean; position of greater curvature of stomach is an inch above the umbilicus. Analysis of gastric contents after test breakfast indicates a slight degree of hyperchlorhydria. No sign of hypersecretion; stomach free from gastric juice in the morning. The deep reflexes are exaggerated. Patient does not sleep well. No sign of organic disease of the nervous system. Other organs normal. Patient is placed on a diet suitable for hyperchlorhydria, and a mixture containing sodium bicarbonate and aromatic cascara administered.

Jan. 26th, 1905.—Patient is taken at 1 a.m. with vomiting and pain in the region of the stomach. The pain is variable in degree, being slight at one time and very severe at another. Vomiting gives partial relief. The first vomitus contained food eaten the previous evening and was very acid. No quantitative determination was made. The vomiting continues after the stomach was washed out, and the vomiti still contain free hydrochloric acid and pepsin, but no particles of food. In about twelve hours the vomiting becomes less frequent and ceases on next morning.

Treatment consists in administration of codeine phosphate and bromides of sodium and strontium. No food while the patient is vomiting. Then the treatment adopted before the attack is resumed.

After a few weeks patient left the city, and since then no report has been received concerning his condition.

SOME MASTOID CASES WITH COMPLICATIONS*

By WM. CRAWFORD, M.B.

Mr. President and Members of the Hamilton Medical Society:

In presenting short notes of several cases of mastoid disease which I have operated on and which have presented to me unusual phases of the disease, I only wish to contribute, if possible, to our general knowledge of the disease, and think that discussion will elicit new knowledge of how to treat them so as to lessen the mortality of this, one of the most important diseases of to-day. In selecting these cases to report I have done so because they have been unusual in some way or ways, and the fatal cases have been reported as well as the recovered. The other cases of mastoid disease I have operated on have all been ordinary and have all recovered.

SOME MASTOID CASES WITH COMPLICATIONS.

CASE 1.—G.B., female, aged 30. First seen Sept. 6th, 1904. History good; well nourished; always has been well with exception of several attacks of ear-ache which she has had during the past few years. Recovered from each attack after some discharge. This attack started with pain about the ear and all over head about a week before I saw her, but the constant pain over the top of head was the worst. I found her suffering a great deal from this head-ache over top of head (not localized), some slight tenderness over the situation of the right antrum, but very little local pain in that region. Temp. was 103 deg., external canal was swollen on all sides, and I could not get a satisfactory view of tympanum. I incised tympanum and canal wall and got a very little pus discharge, and relief of tenderness. Next day local pain less, but head pain the same, temp. 102 deg. Incised tympanum again with more discharge and relief of local symptoms. Patient and friends very averse to any operation, although I told them of the probability of it. Next day, Sept. 9th, temp. 101 deg., patient sitting up, most pain and tenderness gone, and feeling much better. This seemed to show that the otitis media was all the trouble, and she was instructed as to the treatment to be pursued, and to come to office. She did not come or send any word. Oct. 22nd, her family physician had been called in the day before and finding I had the case before he notified me and I saw her again. She had had a severe

*Read before the Hamilton Medical Society, March 6th, 1906.

headache and pain since the day after I had seen her before, but they had not notified me. Much pain over top of head, slight, localized tenderness over antrum region, continued sagging of external canal wall, patient dull mentally and in great distress. Temp. 102 deg. I advised operation at once, and brother and sister who were present consented, but as this was late in the afternoon and place not suitable, I had them next morning take her to St. Joseph's Hospital. Temp. on admission 100 4-5 deg. In the afternoon I opened the mastoid bone, finding it very much sclerosed, and the first opening found was the antrum, which was filled with fetid pus. Cleared out well whole mastoid bone and antrum and made free communication with middle ear cavity. Temp. after the operation 100 1-5 deg. There was considerable albumin in the urine. Next day patient was some better, little pain, and temp. 100 deg. Another day and pain over top of head was as bad as ever, and temp. had come down to 99 deg. Next day again, temp. 98 4-5 deg., and pain in head continues, expression dull. On 27th condition the same, and concluded to extend wound and see if any other collection of pus could be found to produce the symptoms. Bone was removed back over sigmoid sinus and a small epidural abscess was found over the vein, but no indication of any more extension. Patient did not bear anesthetic well and operation had to be stopped and perform artificial respiration. There was no sign or characteristic symptoms of sinus involvement, such as chills, light temperature, local pain, or tenderness, and so the wound was dressed and patient put back to bed.

Next day, the 28th, the patient seemed better, having had a more natural sleep for the greater part of the night. Temp. 99 deg., pulse 80. After the first operation temp. went down to normal and on 29th pain in top of head as bad as ever. Oct. 1st pain still severe on top of head. Optic neuritis present in each eye, more marked in left eye, which also had some small hemorrhages. On consultation we concluded to try again, and patient was taken to the operating-room table for the third time, and the bone was removed extensively back over cerebellar region and up over cerebrum also. Sinus was found occluded, and on being incised no blood flowed. Internal jugular vein was then dissected out in the neck and tied, and sinus could not be syringed open between wounds. Cerebrum was needled in various directions with no result. There was some inflammatory tissue back over cerebellum,

and with a little manipulation some pus came from upper part, and on enlarging about two ounces of fetid pus poured out. No well-defined wall about abscess. Cavity large enough to admit finger, and opening was at upper surface. Cerebellum much disintegrated and distended. Drainage tubes were inserted in abscess cavity and wound dressed, leaving it open. Prognosis bad. Next day patient brighter, pain gone, having had a good night's sleep. Temp. 100 deg., pulse 120. For the next few days patient was restless, complained of pain in back of head and neck, had distress in breathing, some delirious. Part of cerebellum became discolored and dead, and I excised a dead portion as large as half my thumb. Temp. 103 deg., pulse 116, respirations were irregular; patient had a chill, had difficulty in swallowing, dimness of sight. These bad symptoms disappeared in a few more days under good nursing, and by the 20th she was doing well and wound healing nicely. Some diplopia and dizziness when sitting up. Right arm and leg very weak, left normal. Nov. 28th left hospital with wound nicely healed. Dec. 3rd wound completely healed, right arm and leg yet weak. Feb. 4th, 1905. —For a few days wound has been painful, and on palpation found a small fluctuating spot and incised, and found a small pocket of pus with sinus leading down in direction of antrum, and some discharge from meatus. This sinus and pus discharge has continued till now, although not accompanied by other bad symptoms and no pain.

Conclusion.—In the light which the operations revealed in this case undoubtedly a radical should have been done at first, but when first seen I was not sure that any mastoid operation was needed, and absence of tenderness over mastoid was explained by density of bone over antrum, and patient's friends especially were very averse to any operation. Through patient's delay in notifying me of continuance of symptoms she was not seen again until condition was so bad that the only thought in my mind was that of doing enough to save patient's life for a while.

Now, before a complete cure is obtained it will be necessary to remove original cause of trouble by removing the ossicles and curetting middle ear cavity, and I propose doing that when patient's health and strength are recovered, if I can obtain her consent.

Query.—How long had cerebellar abscess been present? My opinion now is that it had been there for probably a year

or more. Why is it arm and leg affected? Probably produced by pressure on motor area of cerebral cortex.

Case 2.—Mrs. C., aged 58. Family history good, has been a fairly healthy woman. About fifteen years ago had left mastoid operated on, and at intervals since the old wound has broken out and pus discharged for a time and then healed.

About Sept. 1st, 1905, right ear began to pain and has continued since with remissions. Temperature has varied from 99 to 100 deg. Pain radiates over side of head. Sept. 21st I saw the case in consultation with the family physician. Right tympanum, on inspection, showed bulging in lower posterior part, tenderness slight over antrum. Paracentesis of tympanum produced a flow of pus and cessation of pain, and as symptoms were not greater than those produced by an acute otitis purulenta, no more was done that day. For next few days pain ceased and temperature came to normal again. Pain started and temperature came up to about 100 deg., with a good deal of discharge from meatus. Saw patient again on Oct. 8th, and as there was constant pain and temperature 100 deg., with more marked tenderness over antrum, I did an ordinary mastoid operation, finding very little pus but extensive breaking down of mastoid cells and a very large mastoid. Entire mastoid was removed, and auditus and antrum curetted and free drainage given to middle ear cavity. Wound was packed as usual and healing by granulation took place; temperature came down to normal; pain ceased and external wound healed by middle of November. Discharge from meatus lessened but did not entirely cease. Case was in the country, and was under charge of family physician, and I did not see it again until Dec. 30th. Was told that for the last three weeks pain had again been complained of over side of head and discharge had slightly increased, and lately some swelling of tissues over zygomatic arch with tenderness on pressure. General condition weak from long continuance of trouble, but was up out of bed and at table for meal every day. Tongue coated; temperature 99 2-5 deg.; tenderness over arch of zygomatin, and condition was thought to be necrosis of bone from infection, or from some cells that had been overlooked in former operation. Although patient was weak operation to relieve condition was necessary to save life of patient. Relatives and patient consented, and she was brought to the City Hospital that day and operated on next morning. Ether was administered by an expert, and I was assisted by

the family physician in operation. An incision was made starting from upper portion of old wound and curved around over top of ear toward arch of zygoma for about two inches, severing a portion of temporal muscle. It had dissected up the periosteum over a space as large as a silver dollar and invaded the muscle and reached down under the arch of the zygoma a slight extent. The abscess cavity was thoroughly curetted, and some softened bone was found at the root of the zygoma. These were removed by curette and rongeur, and to prevent any further possible trouble it was thought best to do a radical operation and turn all this space into one cavity which could be inspected and treated through the meatus. The wound was packed in the usual way, leaving the incision open except at upper part and facilitate dressing until site of abscess cavity was granulated. Patient bore operation very well, pulse not exceeding 86 and fairly well. To prevent any untoward symptoms strychnine was given hypodermically, and on being put to bed saline was given under breast. About an hour after I had reached home I was telephoned by the house surgeon that patient was looking bad, breathing poor, blue appearance, pulse weak, etc. I asked him to give a solution per rectum and I would be down. Before I could get ready he telephoned patient was dead, was *in extremis* when he reached her after telephoning me at first.

Conclusion.—What was the cause of extension of disease? Did I fail to find all diseased cells, or was there extension from middle ear in the other direction? Should I have done a radical at first operation? Was her bone tissue unhealthy, as shown by result on other ear? It teaches me to be thorough in search of possible disease when operating on mastoid.

Case 3.—L. H., aged 10, has had a discharging ear at intervals for some years. About August 7th, 1905, after exposure to cold and wet took pain in ear, which has continued and increased in intensity, and on the 14th caused a slight discharge from meatus. That morning I was asked by family physician to go to the country to see her, but was unable to go at once, and arranged to go at noon. Just when boarding the car I received a telephone message from physician not to come, as in his opinion the girl was very low and not able to stand an operation. Next day noon received another message to come, as girl was in much the same condition as the morning of the day before. I found patient semi-conscious, temperature 102 deg. She had had some mastoid tenderness and

several chills, followed by mental dulness. I told the friends that without something being attempted she would not live, and that operation might not save her, but would probably give her the only chance possible. I was asked to operate, and did so with attending physician giving anesthetic, and only a family nurse to assist, and conditions such as could be hastily improvised. Found subperiosteal abscess over antrum, but most of mastoid healthy. Antrum very large and filled with broken-down tissue; extended wound over sigmoid sinus, which I found occluded. It was opened and found filled with clot. This was curetted out of both ends, and a fair flow of fluid blood obtained from each end. Antrum was thoroughly cleared out and a free communication made with middle ear cavity. This consumed some time, and it was getting near the end of a short fall afternoon. Darkness was coming on and the only light available was that from oil lamps. Patient also did not bear anesthetic very well, and while I thought of dissecting out internal jugular vein in the neck and ligating it, I concluded that the danger of leaving sinus as it was was not greater than of attempting more under present conditions. Wound was packed and dressed and patient put to bed. I asked to be informed in a day or so how patient was doing, but word which was sent by attending physician was not delivered, and I did not hear for some time. Physician then informed me that patient did well for about ten days. Temperature had gone down, mental condition cleared up, no more chills, no pain, wound was healing nicely. Then she became worse, had chills, and gradually sank and died a couple of days after bad symptoms started; no autopsy. Symptoms were such as would be produced by metastasis from original infection, and I think such must have been the case, although every infected part seemed to have been removed.

Case 4.—Miss A. B., aged 25. Family history good; had measles when a child, and also suppuration from left ear, and occasionally since would have trouble in that ear, with discharge. Since about a year ago it has been gathering and breaking every week or so. On examination, June 20th, 1904, external canal was filled with a foul-smelling discharge and tympanum was found ruptured. On cleansing and syringing out middle ear a considerable quantity of dark colored sticky mucus was washed out, and drum healed in two days. In a few days again ear became painful and drum bulging, and I made a large opening in posterior segment and syringed out

a quantity of mucus. This occurred several times after, and I then cut a flap of the drum to leave a permanent opening. This prevented accumulation and pain, but treatment applied to middle ear cavity and good drainage did not stop the discharge. I could not with probes detect any dead bone, and decided after consultation to open mastoid and drain antrum.

Nov. 23rd, 1904, operated at the City Hospital, and did a regular Schwartz operation, and found mastoid cells somewhat softened, and in antrum some polypoid condition of membrane lining cavity. This was all curetted out and free opening made into middle ear. Patient did well, wound healing by granulation nicely, and discharge from meatus almost stopped, and she left hospital on Dec. 10th and went to stay with a friend. On Dec. 13th I found wound somewhat inflamed, red and painful, and some pus discharge; no pus at any time before, but house surgeon at hospital had examined mucus discharge and had found staphylococci present. This went on for some days, and on enquiring found that there had been a bad case of erysipelas in house some few months before, and I now believed that my case had become infected. However, external wound healed, but there continued to be a very small amount of mucus discharge. Not stopping, and with patient's consent, I did a radical operation at City Hospital, removing ossicles, which were found slightly involved, and curetting middle ear cavity, and immediately closed the external wound, which healed very quickly, and she left the hospital again on Feb. 7th, 1905, with external wound healed and only a little moisture in what used to be the middle ear. This gradually ceased, being freely accessible from external meatus. Cavity became epidermatized and dry. A good result, with hearing at six feet.

Comment.—This case was unique in my experience, tympanum being entire and no pus at any time from middle ear, but resisted all other methods of treatment, and necessitating a radical operation to cure. Also, what influence did the attack of erysipelas have on the continuance of the very slight mucus discharge which was nearly stopped at time of the attack?

Case 5.—Mr. E. S., male, aged 24. Consulted me on March 24th, 1904. Has had for a few days a pus discharge from left meatus. Has had but very little pain. This was treated in the usual way for a couple of weeks without lessening discharge. A few granulations presented themselves at about the

middle portion of posterior meatus, and on their removal a small perforation was found from which pus came. This was enlarged and treated by antiseptics. Continued pus discharge, did not stop, but there was no pain of any account and no rise of temperature, and patient continued at his work. On April 25th, in morning, patient presented himself with a swelling behind ear, and I then advised immediate operation, and a consultant concurring in that opinion, he was sent home and got ready for operation, which was performed at his home that same afternoon The entire mastoid bone was found disintegrated and filled with pus, which was also found in large quantity in digastric fossa. It was thoroughly cleaned out and free opening established with antrum and middle ear cavity. Course of healing was normal and wound granulated and was thoroughly healed by May 12th. Result, perfect hearing as before the trouble.

Comment.—This was a typical befold mastoiditis, and produced this very large amount of destruction of mastoid bone with a minimum amount of disturbance of general health, and without producing any destruction of bone about antrum or middle ear, leaving the ossicles healthy when drainage was established posteriorly.

ADDITIONAL EXPERIENCE IN THE TREATMENT OF PELVIC DISEASE ASSOCIATED WITH PSYCHOSES.

By ERNEST A. HALL, Victoria, B.C.
Fellow British Gynecological Society.

Two years ago at the meeting of this Association in Victoria I brought before you a matter that has engaged the attention of not a few of the leading men of the profession in Europe, viz., that of providing accommodation for the better treatment of extreme forms of nervous diseases and of recent cases of insanity, and for the placing of such cases under more favorable circumstances than are usually found in our provincial hospitals. This matter, though favorably received by not a few members, was postponed for one year and finally dropped. It is not my purpose to re-introduce discussion upon this matter, as in the tardy evolution of rational treatment of the insane, the realization of the ideal is evidently yet in the dim distance. I will dismiss this subject with an extract from an address delivered by Dr. Clouston, of Edinburgh, before the Medico-Psychological Association, July 25th, 1902. In speaking of the advantages of treating recent cases of insanity in wards associated with the present general hospitals he said: "Firstly, any one may go to seek advice at a hospital, or to be treated in one, without losing any of his self-respect, injuring his prospects in life, or going counter to any special prejudice in his mind. Secondly, the treatment of this class of diseases—I attach enormous importance to this argument—would educate our poorer population, and, indeed, the whole population, into entertaining the belief that mental disease is on all-fours with other classes of disease, and that it in no way implies shame or repulsion. If this education could take place to any degree it would sweeten life to every family in which mental disease has occurred, and that would probably comprise every fourth or fifth family connection in the land. Besides, it would diminish one of the most poignant terrors in the lives of those who have suffered from the disease or who fear its occurrence. The absence of this prejudice and fear would of itself greatly aid recovery.

"Assuming that there would need to be a time limit, say six weeks to two months, to the stay of those patients in such

wards, just as there is in the case of most ordinary medical and surgical patients, would such a comparatively short period be sufficient for effective treatment? In a large number of cases this period would be sufficient. In the cases of those who got worse, or in whom the symptoms were prolonged, we have the asylum to fall back upon. We have the means, therefore, of continuous special treatment where needed. I have found that out of the ordinary certified patients 10 per cent. recover, and are discharged within six weeks; 20 per cent. within two months. A much larger number treated in the earlier stage for the milder form of disease would recover; and many could safely leave the hospital to complete their recovery at home. If you have broken the bad brain habit, if you have successfully contended by proper treatment with the worst symptoms, the patients could with safety go home to complete their convalescence."

With regard to my investigation into the association of pelvic disease in women with mental disease, I have nineteen additional cases to report. Of these eighteen were married, and one single; two had recovered mental health in the provincial hospital for the insane, and two others were not mentally affected at the time they came under my care, one for obstruction of the bowel from adhesions to a larger parovarian cyst. Eighteen of these patients showed decided pelvic disease.

As it is principles we are endeavoring to evolve, rather than the report of and discussion of "cases," I will make my report as brief as possible.

No. 111. Mrs. ——, aged 33. Good heredity, married two years, one child; referred by Dr. Proctor. Six months after birth of child had attack of religious mania, took dislike to her child. She was curetted by her family physician, who also found an enlarged ovary. When she came under my care some months later she would not carry on a reasonable conversation, but continually talked of hell and her burning in it. She was obedient to the nurses. The treatment consisted in curetment, amputation of the cervix, removal of right cystic ovary and both tubes. Convalescence normal. Within a few weeks a great mental change was apparent, and after six weeks I was unable to detect any trace of her former delusions. The last report from her husband was perfectly satisfactory. Dr. Proctor reports this case completely recovered.

No. 112. Mrs. ——, aged 38. Melancholia for some

years. Seen with Dr. W. B. McKechnie. Uterus enlarged, with fibroid cervix. Hysterectomy was done by Dr. McKechnie, but up to last report no alteration of the mental condition was noticeable.

No. 113. Mrs. ——, aged 33. Four children, youngest 11 years. For four years suffered from attacks of melancholia lasting six weeks. Examination showed lacerated perineum and left salpingitis, also piles. Operation recommended.

No. 114. Mrs. ——, aged 35. Married twelve years. Three children, youngest 8 years old. Brother died in asylum after injury to head. Was in provincial hospital six months with mental recovery. Dr. Doherty diagnosed internal trouble. Examination showed right movable kidney, cystic ovary, lacerated cervix and perineum. At the operation the omentum was found adherent to the uterus. Convalescence normal.

No. 115. Mrs. ——, aged 35. A borderland case, good heredity, no children, suffered from pain in left side for six years. For some time had become mentally confused, careless of personal appearance, with intermittent attacks of melancholia. The conditions found were: Appendix constricted by fibrous band, omentum adherent to anterior abdominal wall, both ovaries cystic. Convalescence normal. Mental stability recovered.

No. 116. Mrs. ——, aged 28. Three children. Mother insane after each child. Brother insane from self-abuse. For three years suffered from dull pain in head and back. Intermittent melancholia; at times would run into street in an excited condition. Mind cloudy. She had been to several practitioners who diagnosed ulceration of the womb. The conditions found were: Metritis, with fungosities; chronic appendicitis, and slight uterine prolapse. Convalescence normal. Mental improvement, but at times still depressed.

No. 117. Mrs. ——, aged 30. Two children, good heredity. Had received treatment for congestion of the womb. Melancholia. Several times threatened her life. She suffered severe pains in the head and back; increased during menstruations. The conditions found were: Laceration of cervix; ovaries septic and slight prolapse; convalescence normal; pains in back and head all but removed; mental condition improved.

No. 118. Mrs. ——, aged 30. Mother and aunt melancholic. Two children. Miscarriage six years ago. For several years had been very nervous. During her husband's absence

she awoke at 1 a.m., screaming that he had been killed in a railway wreck. This happened exactly twenty-four hours before he had been in a wreck on the C.P.R., in which one of the employees of the road had been killed. She continued acutely maniacal. Under chloroform I found sufficient to justify surgical treatment. The medical attendant absolutely refused consultation and co-operation with me, as he said there was nothing to be done. I found lacerated cervix, fungosities, left ovary cystic, chronic appendicitis. Physical convalescence normal. There was no mental improvement, and after three weeks she was removed to the Provincial Hospital, where after a few months she made a perfect recovery. She has greatly improved in physical health, never enjoyed better health than at the present time.

No. 119. Mrs. ——, aged 23. Religious delusions and mild melancholia. Good heredity. Conditions found: Cervicitis, with erosion; fungosities, cystic right ovary and adherent clitoris. Convalescence normal. Mental recovery.

No. 120. Aged 28. One sister insane. Married eight years. Three children. Pain in side for years, acute mania. Was referred to me, but was too violent to treat in private hospital; was sent to Westminster, where she recovered after a few months. The conditions found were: Lacerated cervix and perineum; both ovaries cystic; partial uterine prolapse. Convalescence normal. Physical health improved.

No. 121. Mrs.——, aged 41. Good heredity, three miscarriages, a history of gastric ulcer, followed by delusions. Examined with Dr. Doherty in the Provincial Hospital. Conditions found: Salpingitic adhesions. Treatment recommended. She was removed to the Burrard Sanitarium, but became so unmanageable that she was returned to Westminster without treatment.

No. 122. Mrs. ——, aged 33. Good heredity, three children, well marked delusions, said she had been a horse for years, now a cow, etc. Conditions found: Left ovary enlarged and adherent in cul de sac. Operation recommended.

No. 123. Mrs. ——, aged 48. Good heredity, five children. Had abscess from last child; suffered from severe pains in head and pelvis, and delusions; was unmanageable; destroyed furniture, burned silver plate, etc. Conditions found: Lacerated perineum, cystic ovary and adhesions. Operation without any mental improvement. Was subsequently placed in the hospital for the insane.

No. 124. Mrs. ——, aged 38. Good heredity, seven children. Melancholic after each child-birth. Youngest child two years old. Has been confused and forgetful. Had been recently in the asylum. Conditions found: Lacerated perineum, cystic left ovary, chronic appendicitis. No apparent mental improvement when she left the hospital.

No. 125. Mrs. ——, aged 24. Two children, good heredity. Referred by Dr. Boucher, of Phœnix. Suffered from severe pain in head and side; became nervous, excited, with delusions. Conditions found: Right ovary cystic, chronic appendicitis. Convalescence normal. Mental condition very much improved upon last report from Dr. Boucher.

No. 126. Mrs. ——, aged 37. Good heredity, three children. Melancholia from birth of last child, four months previously. Suffered at that time from pelvic abscess, which was opened externally. She became unable to manage her household, and had to be under constant surveillance. Examination by Dr. Frank Hall and myself showed large ovarian cyst with adhesions. Operation by Dr. Frank Hall, with immediate mental recovery.

No. 127. Mrs. ——, aged 40. Good heredity, four children. Complained of abdominal pain for ten years. Had nervous prostration for eight years, with periods of mania. Perfectly rational at present time. Conditions found: Cervical tear and polypus and myometritis. Convalescence normal. The after physical history of this case has not been as satisfactory as I had expected. It was the only case of the series in which I did not open the abdomen. I regret that this was not done, as she has subsequently complained of symptoms referable to conditions that might have easily been rectified. In dealing with these cases, especially when there have been indications of intra-abdominal trouble and where operative measures are demanded, I would favor opening the abdomen as a matter of more accurate diagnosis.

No. 128. Mrs. ——, aged 56. Good heredity. Seen in consultation with Dr. McKechnie. Simple dementia. Examination showed slight perineal tear, but not sufficient to call abnormal. No treatment recommended.

No. 129. Mrs. ——, aged 39. Good heredity, no children. For several years had given evidence of mental disturbance. Subject to fits of ungovernable temper, alternating with depression; took little interest in domestic duties, slovenly in habits and appearance, but not decidedly affected at time of

operation. I removed a large par-ovarian cyst. Convalescence normal.

The operative treatment given these cases is most conservative. Normal ovaries are never removed; cystic ovaries are resected. All other structures are dealt with in the same manner that we would deal with similar conditions in ordinary patients, with this exception, that, in view of the desirability of limiting the production of defective offspring, to diminish the insane potential, I request the friends to allow me to sterilize the patient by removal of the tubes close to the uterus.

As to the results in these nineteen cases, all but one presented definite pelvic lesions. There were no deaths in the cases submitted to treatment. Of the other eighteen, no treatment was recommended in one case; in two operative treatment was advised, and of the remaining fourteen upon which I operated the result was physical improvement in all cases. As to the mental results, four were not mentally affected at time of operation, and, so far as I have been able to ascertain, of the remaining ten, four recovered, four were improved, and two were unaltered.

These results superficially viewed do not give a very brilliant showing, but we must remember that these patients were treated for physical disease. No case is treated in which a physical lesion is not ascertainable, and the physical results have been equal to that obtained by any of you in the management of your ordinary gynecological patients, but in addition to the improved physical condition we can report four mental recoveries and four improvements out of twelve operations upon those mentally clouded. The results are worthy of consideration. Or, to take a different view-point, surely the unfortunate dement suffers sufficient distress in the mental disability without the additional load of physical disease; and who so unsympathetic, so inhuman, as to deny her the privilege of physical relief?

Psychic abnormability is conditioned by imperfect development or physical deterioration. Irritation, sepsis, and degeneration, too often lead the way through the mazes of nervous phenomena from slight alterations of thought, habit, and conduct to complete rational subjugation. This process is frequently somewhat tardy, and it is during this prodromal period, before thoughts and habits are confirmed, that we should most carefully interrogate the various bodily organs and functions and endeavor to determine the presence of lesions that might in any way interfere with physiological harmony, remember-

ing that insanity is the psychic sum of the physical abnormabilities, and that perchance the removal of but a comparatively minor lesion may regulate cortical metabolism and restore the mental balance. Bearing upon relationships, I quote from McNaughton Jones:

"The connections between the vagina, uterus and ovaries through their nervous supplies, with the splanchnic nerves, and with the spinal chord in the sacral and lumbar regions, through the pelvic and hypogastric plexuses, anatomically explain many of the reflex phenomena that follow upon stimulation or irritation of the ovarian and uterine nerves consequent upon disease in the ovaries or uterus.

"The reflex connection between the mammary gland and the uterus, and between the sciatic nerve and the uterus, shows that this reflex association is established between the uterus and such a distant part as the nipple, and other peripheral nerve-trunks, as those of the sciatic.

"As examples of this, we may take the occurrence of varying shades of optic neuritis and retinal irritation in connection with suppression or irregularity of the catamenia; neuralgic pains in the eyeball associated with the menstrual epoch, neuralgia of the supra and infra orbital nerves, slight epileptiform seizures of the facial muscles, toothache and dental neuralgia, laryngeal migraine and functional aphonia, or paresis of the intra-laryngeal muscles, milder forms of hypertrophic rhinitis; and similarly, tinnitus aurium and vertigo, sympathetic neuralgia and temporary congestion of the mammæ. As consequences of menstrual irregularities, we find irritation of the dorsal and lumbar painful spinal zones, herpetic eruptions of the skin, functional irregularity of the cardiac rythm, gastralgia and nausea, slight ichteric attacks, atonic or irritable states of the intestines, irritation of the bladder, with increased frequency of micturition, pains in the branches of the lumbar and sacral nerves; varieties of headache, and severe hemicrania. All such symptoms may be accounted for by reflex vaso-dilating or vaso-constricting effects produced by irritation arising in the uterus or ovaries, as the result of arrested or imperfectly discharged physiological processes.

"It is equally true that the ill-health of the uterus or ovary is frequently the first step in the general deteriorating process, and as it originates, so it maintains it. All we know of the physiology of uterine action compels us to regard the uterus

and ovaries as the strongest links in the chain of the woman's health. Weaken them as you may from without or within, and you immediately, but fundamentally, touch all the mainsprings of her life."

With reference to the results of my work in this department, which has covered some seven years, my statements will be somewhat more conservative than those given expression to in the enthusiasm which greeted the opening of a comparatively new field for therapeutic exploitation. Results, even beyond the most sanguine expectations, in the early part of this work no doubt were capable of giving a bias to my judgment and influencing conclusions. This may have been a factor in my earlier discussions of this subject, and has possibly led to the making of statements that to-day are to be modified. Yet the main contentions of seven years ago stand firmly established to-day, and it becomes in this department, as in all others of our profession, a matter of keen discrimination, careful judgment and skilful application.

It is satisfactory to note the ever-increasing attention that is given to the matter of physical disease in the insane, and also the fact that many of the leaders in the profession, both in America and Europe, are agreed upon the important role that disease of the genital organs of women play as causative factors in the production of psychoses, and coming nearer home I have to thank not a few of the profession of our own province for their appreciation and hearty co-operation in the work. There are yet those who ridicule, and a few who oppose. Of these it can be unprejudicially said that as a rule they are those who have given the matter very little consideration and have made no personal investigation.

Of the intricacies of co-ordination, association and interdependencies of mind and body underlying our superficial observations, we know nothing. We do not dare to state that a given mental defect is conditioned by a corresponding physical abnormality, that an alteration of habitual conduct can be traced to a tangible physical disease; but what is paramount to this discussion is, does the lacerated cervix with everted membrane, the adherent omentum, salpingitic adhesions, cystic or fibroid enlargements interfere with normal physical metabolism? If so, then let us show a willingness to remedy these conditions. With the mental phenomena, as such, we as surgeons have nothing to do except to hope for mental relief to follow the restoration of physical health.

OPSONINS AND AGGRESSINS—A REVIEW.

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The role which opsonins play in immunity against disease is so interesting and the literature so extensive that the subject is worthy a short review, and since the theory of aggressins is at first sight a directly opposite view, it also deserves some attention.

Metchnikoff has shown that the white corpuscles of the blood have the power of ingesting and devouring bacteria, and believes that through this cellular agency we have immunity to disease. (Ref. 1, 2, 3.)

Buchner and his school believe and have shown that immunity in some diseases at least is due not to the cells but to the fluids of the body. (Ref. 4-11.)

Wright has shown that in some diseases immunity is due not to the cells alone, and not to the fluids alone, but to their combined action. (Ref. 12, 13.) To do this he takes each agent entering into the act of phagocytosis, viz., the leucocyte, the bacteria, and the fluid in which they move, and these he studies in their various combinations, imitating, of course, the natural conditions as to temperature and alkalinity of media.

He found that when the leucocytes and bacteria met in an artificial normal saline media no phagocytic action took place. Also, if he used as media normal serum heated to 65 deg. C. no action occurred. And if he used serum a week old action was again absent. But if he used fresh, unaltered serum the bacteria were taken up by the leucocytes.

Thus, apparently, some substance in the fresh, unheated serum acted as a sensitizer or appetizer, and this has been called by Wright opsonin—I prepare food. Briefly the technic of the experiment is as follows:

Prepare the following material: (1) Emulsion of bacteria made by rubbing up a little of a pure agar culture in distilled water or normal saline; (2) fresh serum, prepared by drawing about six drops of fresh blood into a miniature cigar-shaped tube with capillary ends, sealing and centrifuging (3) a quantity of corpuscles free from serum, prepared by dropping ten drops of fresh blood into 4cc. of a fluid to prevent clotting, for which 1 per cent. sodium citrate solution

is best. Then by the settling of the corpuscles to the bottom by centrifuging they are washed free from serum and are still in an uninjured and active condition. (Ref. 12, 13, 14.)

Equal volumes of corpuscles, serum and emulsion of bacteria are mixed and incubated for fifteen minutes at body temperature, 37.5 deg. C., using as incubation chamber a small test tube, capillary tube, or, after the original method of Leishman, a slide and cover glass. (Ref. 15.)

At the end of period spread contents on glass slides and stain cocci by Leishman's, Jenner's, Wright's, or Hastings' stain, tubercle by the Zuhl-Neilsen methylene blue method. Under the 1-12 lens the number of the bacteria in the interior of the corpuscles are counted.

By similar technic, with variations and modifications, opsonins have been shown to have the following qualities: They are present in almost constant quantity in the normal animal (Ref. 13); are present at birth; are thermolabile and destroyed above 65 deg. C., and gradually disappear on standing in about six days (Ref. 12); they are specific (Ref. 16), and the specific opsonin may be precipitated by an emulsion of that particular variety of bacteria; are absorbed by the latter, from which they are then inseparable, and are not affected by heat above 65 deg. C. (Ref. 13); the relative degree of phagocytosis is directly in proportion to the quantity of opsonin present (Ref. 17).

In nature opsonin are bodies built on the type of agglutinin and analogous to Ehrlich's receptor of the second class. (Ref. 16.) They are composed of two groups, a haptophore group for attaching to bacterial receptors, and an opsoniferous group which effects the change necessary for phagocytosis, and that the action of solutions of certain poisonous or irritating drugs prevent phagocytosis, not by harming the leucocytes but by preventing the sensitizing action of the opsonins. (Ref. 17.)

Their proportion is greater in certain parts of the circulation than in others, being less around foci of septic inflammation. (Ref. 12.)

In healthy persons they are present in about the same ratio, but in the subjects of chronic infection by pathogenic bacteria the specific opsonin is decreased, but in proportion as it increases the infection decreases.

This has been found especially true in cases of chronic infection by the tubercle bacillus, staphylococcus, pneumococcus, streptococcus, gonococcus, bacillus coli and dysenteriæ, in fact,

in all except the bacillus diphtheriæ and bacillus Xerosis. (Ref. 12.)

But the point of practical importance in therapeutics is that it has been found possible to experimentally increase the specific opsonin to a degree exceeding the normal healthy ratio, and when this can be accomplished the disease, which had formerly resisted all former measures to alleviate it, thus comes under control. (Ref. 18, 12, 19.)

Among the diseases in which this has been done are tuberculous ulcers (Ref. 19), tuberculous glands (Ref. 20), tuberculosis of bones and joints (Ref. 21), tuberculosis of bladder (Ref. 22), lupus vulgaris, tuberculosis of lungs, primary staphylococcic infection producing furunculosis, carbuncles, acne sycosis (Ref. 23), pyorrhea alveolaris (Ref. 18), pneumococcic infection causing chronic empyema (Ref. 24), gonococcic infection causing gleet, bacillus coli and bacillus dysenteriæ causing chronic diarrhea.

The line of procedure in treating a case of chronic infection so far incurable is, briefly:

1. First, cultures and plates are made, and, if possible, the infecting organisms are isolated.

2. A determination is made of the opsonic index, *i.e.*, the ratio of opsonin in the blood of the infected individual to that in a healthy person, or, putting it in other words, the ratio of organisms ingested by a given number of leucocytes in a given time, when the patient's serum is used, to the number ingested under exactly similar circumstances when the serum of a healthy individual is used.

3. A sterilized vaccine is prepared of the organism from a pure culture on agar. In the case of the staphylococcus this should contain about 500,000,000 cocci per c.c.m., or about 1.0 mg. of dried culture. (Ref. 25.) In the case of tuberculosis the vaccine should contain 1-2000—1-200 mg. of dried tubercle powder per c.c.m. (Ref. 25.)

4. Following the determination of the opsonic index a subcutaneous injection of vaccine is made, the dose varying 0.1 mg.—1.0 mg. in coccal infections and from 1-1000—1-500 in tuberculous cases.

Subsequent treatment depends on the result of the initial injection.

The effect of an inoculation of vaccine in a healthy, uninfected individual is an immediate rise in the opsonic content of the blood. (Ref. 27.)

The effect in an unhealthy, infected person is the opposite. A fall or decrease which extends gradually over a number of days is the negative phase, to be followed by a return to its original height and a subsequent rise beyond—the positive phase. (Ref. 27.)

Coincidently with the rise occurs an amelioration in the signs and symptoms of the disease, which again assumes a stationary but improved condition, and a daily determination of the opsonic index over a period shows that it also has reached a stationary but higher level.

Exceptions to this rule occur if (1) the initial dose has been too large; (2) if the machinery of immunization, *i.e.*, the power of reaction, is already overtaxed; (3) if reinoculation takes place within the negative phase. (Ref. 28, 19.)

Reinoculation of a larger dose after the positive phase has reached its height is followed by similar effects as before, the amount of opsonin being gradually increased until it is equal to or greater than normal, *i.e.*, an opsonic index of 100-100 to 150-100, etc., and with this the disease shows marked improvement.

Reinoculation is, therefore, contraindicated until the last has produced its maximum effect, as shown by the opsonic index, and is entirely contraindicated in those cases in which the first injection is followed by a permanent negative phase.

Acute or progressing diseases are apparently unsuitable for this method of treatment, due, doubtless, to the fact that autoinoculation is continually taking place, and that the power of reaction is already overtaxed.

In active tuberculosis exercise seems to produce the same autoinoculation effect, while perfect rest in bed permits the reaction to the toxins already absorbed to take place, and prevents the autoinoculation of overdoses. (Ref. 29.)

The Opsonic Theory in Diagnosis.—Those cases which on repeated examination show a decreased opsonic index to any organism, as the tubercle bacillus, are probably infected with that organism. (Ref. 30, 13.)

When several organism are present, that toward which the opsonic index is lowest is probably the most important in causing the disease. (Ref. 18.)

When, after an injection of T-R for diagnosis the fever reaction is negative, a sudden fall of the opsonic index may be accepted as a positive indication. (Ref. 27.)

Value of Opsonic Work in Prognosis.—Cases of staphy-

lococcic infection showing a long-continued negative phase after injection do not offer good hopes of cure.

Cases of tuberculosis showing an even opsonic index near normal are not subject to severe autointoxication, and hence the disease must be quiescent or circumscribed.

In therapy its value has been already mentioned.

These observations have been verified and confirmed by Wright, Bullock, Bruce, Goadby, and many others in England; by Von Hektoen and Ruediger, E. Walker Adami, Klotz, J. J. Mackenzie, Simon, and many others in America.

Aggressins.

To Wright's theory of opsonins, which appeared in 1902, Bail's theory of aggressins, appearing in 1905, was apparently the direct opposite. (Ref. 31.)

While one believed that absence of phagocytosis was due to lack of a special substance which pensitized the bacteria for ingestion by the leucocytes, the other believed that absence of phagocytosis was due to presence of a special substance excreted by the bacteria, and capable of paralyzing the leucocyte. While one theory seems the antagonist of the other, there appears reasons why both may be true. (Ref. 32.)

E. L. Walker has shown that the tubercle bacillus representing the class of infectious organisms which do not cause a hyperleucocytosis excretes a toxin which has the power to inhibit the action of the leucocyte in the presence of opsonin; that the toxin and opsonin both act independently, and that the ratio of influence of opsonin in favor of phagocytosis to toxin against it is as — 9 to — 11.

In the other class, in which the toxins absorbed cause a hyperleucocytosis, as in diphtheria, Walker found that the toxins did not prevent or inhibit phagocytosis, but aided it.

According to Bail's division of pathogenic bacteria these two represent two extreme classes, viz., (1) the true parasite, which excretes aggressive substances, which, inoculated in the least quantity can grow, and by paralyzing the cellular powers of defence spreads itself through the whole body, and (2) the true saprophyte which excretes no aggressive substances and develops locally.

The facultative or half-parasite occupies a middle position, since it is able to spread through the body only if inoculated in quantities sufficiently great to produce enough aggressin.

Bail's argument in brief is as follows: If into the blood

stream of one animal are injected simultaneously equal numbers of the anthrax bacillus and bacillus subtilis, by this means being spread equally through the various organs, and if the anthrax bacilli are able rapidly to increase, while the bacillus subtilis do not, although the same powers of defence are exerted against each, this must be due to only one cause, viz., that the anthrax bacilli are able to paralyze the means of defence opposing them. And to do this there must be liberated or secreted a special substance having aggressive qualities, which he calls aggressin.

Among the aggressin-producing bacteria which act as true parasites are the anthrax bacillus in man, the tubercle bacillus in the guinea pig, the diplococcus and staphylococcus in the rabbit.

For the purpose of experiment is employed the peritoneal exudate of a tuberculous guinea pig killed by the intraperitoneal injection of 100 mg. of fresh tubercle bacilli. By this means is believed to be obtained a fluid rich in aggressive substances.

If a few cubic centimetres of this exudate is injected into a healthy animal it does not become sick or show any effect.

If a healthy animal is inoculated with a considerable quantity of tubercle bacilli at one time very slight change occurs at once and the period of sickness is measured by days or weeks.

But when the same doses which singly produced slight sickness are injected together or simultaneously the animal dies in a few hours, which Bail calls the acute death. This seems to bear out his theory that the exudate contains some substances which paralyzed completely the defensive powers, leaving the bacilli to flourish unchecked.

The most characteristic post-mortem findings in an animal after the acute death is a pleural and peritoneal exudate in which lymphocytes almost exclusively exist.

From whence does the aggressin arise? Is it a product of the bacteria, *i.e.*, an excretion, or an endotoxin, the result of the solution of the body substance of the bacteria, or is it produced by the reaction of the tissues to the infection?

The phenomenon of Koch is taken to indicate it an endotoxin. Koch showed that at a certain period of the guinea pig's tubercular sickness a state of over-sensitiveness exists, during which the intraperitoneal injection of a small number of fresh bacilli again results in an acute death. This Bail

attributes to the increased power possessed by the over-sensitive animal for producing a bacteriolysis of the bacilli, thus setting free their endotoxin, which acts as aggressin. (Ref. 33.)

In his later work, however, Bail speaks of natural aggressins which are formed in infected animals and cannot be identified with such as are formed from body substances of bacteria. These cannot be demonstrated chemically and represent only characteristics of fluids due to products which develop in the infected body and not mere products resulting from the reaction of the organism to the infection. Other qualities of the aggressin exudate he found. A small quantity is more aggressive than larger quantities, and a small quantity of heated exudate is more aggressive than an equal quantity of unheated. (Ref. 31, 34.)

These experiments were continued with the diplococcus (34), staphylococcus, bacillus dysenteriæ (35), anthrax and bacillus typhosus (36), all of which were shown to possess aggressin-producing powers.

Kikuchi produced an aggressin immunity to the bacillus dysenteriæ by the injections of its aggressin.

This immunity protected the organism from the bacillus dysenteriæ, and was not characterized by the presence of increased bactericidal or agglutinating substances in the serum. This he claimed to be a new kind of immunity.

Equally successful results were obtained by Hoke with the diplococcus and by Bail with the typhoid.

At first sight this would seem to be immunity due to the fluid substances, but Kikuchi says:

"The striking appearances observed with the injection (intraperitoneal) employed consisted in the rapid appearance of leucocytes in the peritoneal cavity. In proportion as the serum was weak the entrance of the leucocytes in general was delayed. *Strong phagocytosis was only to be observed in active immunity.*"

From this result it does not show on the surface, otherwise than that the German school, headed by Bail, working on aggressins, has achieved the same results as the English school, headed by Wright, working on opsonins, viz., an opsonic immunity brought about by injection of aggressins. Compare Ref. 12 and 35.

Von Pirquet and Schick (Ref. 37), reasoning from the similarity of results obtained by Bail to those obtained by

themselves with serum in serum sickness, believe his results to be explained not by a new theoretical substance aggressive in quality, but simply to the formation of antibodies.

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Selected Article.

PERIODIC VOMITING WITH ACETONAEMIA IN CHILDREN*

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The clinical picture of the periodic vomiting of childhood with acetonuria is well known on the Continent, especially in France and Italy, but in this country it has not attracted much attention, and I have not been able to find any notice of it in the English medical press before 1905. In America also it has been described as early as 1893 under the various nomenclature of gastric neurosis (Snow, *Arch. of Pediat.,* 1893), persistent vomiting (Rotch, *Pediatrics,* 1901), periodic vomiting (Rochford, *Arch. of Pediat.,* 1897 and 1904), cyclical vomiting (Edsall, *Amer. Journ. of the Med. Sciences,* 1903, p. 629), vomiting with acetonemia (Marfan). Personally I prefer the term "periodic," and shall use this designation throughout these remarks.

I will now attempt to reproduce the clinical picture. In the midst of perfect health, without apparent or appreciable cause or error in diet or derangement of intestinal action, the child, who is usually of a nervous or arthritic diathesis, is suddenly seized with vomiting. This vomiting is produced by regurgitation without any premonitory nausea, just as in cases of tubercular meningitis, the vomit being usually watery, sometimes alimentary or bilious; but when this latter is noticed, which is not often, it indicates that the end of the attack is approaching. The vomited matter, at first abundant, diminishes by degrees, so that at the end of the attack the stomach is empty. Attacks of this kind of vomiting happen several times a day, and recur with variable frequency, sometimes every quarter of an hour, either spontaneously or excited by movement, such as putting the child to bed or attempts at feeding. The whole attack lasts usually from two to four or five days, but is sometimes prolonged for two or even three weeks, it being impossible to predict the moment when it will come to an end. Once at an end, it leaves no after-effect, and health is immediately re-established without convalescence. Some slight fatigue may be felt for twenty-four to thirty-six

hours, but the child soon regains his cheerfulness, his color returns, he hardly presents the appearance of one who has been seriously ill—the end is as abrupt as the onset. After a very variable interval of time, a few days to a few months, the attacks of vomiting are renewed with the same symptoms, and the illness may thus continue for years, disappearing completely about the time of puberty. Sometimes the attacks recur with striking regularity. Comby (*Arch. de Méd. des Enf.,* 1901) observed a case in which they were repeated regularly every month. The vomiting is always intractable as at first.

The symptoms which are associated with the vomiting are variable. Usually at the onset of the attack the child is prostrate, lies motionless in bed, neither crying nor groaning, its face pale and drawn, the eyes sunken, and the abdomen retracted. Very often there is constipation, appearing at the same time as the vomiting, rarely diarrhea; the tongue is relatively clean or only slightly coated; the pulse is almost always accelerated, although some have noticed a rate of 50-60 per minute; there may be also irregularity. The temperature does not regularly exceed 100.4 deg. F., very rarely reaching 102.4 deg. F.; in exceptional cases it remains normal. Gastric pain is almost always absent, a point of diagnostic importance: when it does occur it is never at the commencement, but only at the end of the attack when the stomach is exhausted and there is nothing more to expel, and even then the pain appears only at the moment of vomiting and ceases in the interval. Thirst is intense, but the child cannot drink, for the least quantity of fluid is sufficient to provoke a fresh attack. A curious fact is that the child, who absorbs very little liquid, can eject such a large quantity by vomiting; the organism becomes dehydrated at the expense of the vomiting, and this dehydration explains the thirst. The appetite is always retained, an important diagnostic point; for in the different gastro-intestinal or other acute affections of childhood vomiting always produces anorexia.

To recapitulate, the abrupt onset, the absence of previous gastro-intestinal disturbance, the absence of anorexia, the absence of gastric pain, the character of the vomiting, the slight elevation of temperature, which has so little relation to the gravity of the general condition which it is associated with, these are the most important signs to be considered in arriving at a clear conception of the affection.

During the attack the breath has a distinct smell of acetone, sometimes so marked as to be noticeable by anyone entering the sick-room. The urine is scanty, and on analysis shows a definite amount of acetone, and often also of indican. Analysis should be made daily from the commencement of the attack; for although the presence of acetone in the urine is a symptom which is never wanting, it does not always occur at the same period of the illness; sometimes it is found at the commencement, at other times not until the end. The fact that acetone is not found throughout the whole duration of the attack explains how certain authors, having analyzed the urine only once, have denied the existence of this symptom; another reason is, that as this disease attacks specially children of the better classes, there is less facility for making constant examinations of the urine than there would be in a hospital.

Marfan and most other observers have, however, always noticed the presence of acetone in the urine (*Arch. de Méd. des Enf.*, 1901).

With regard to this constant presence of acetonemia, it must be remembered that an abnormal quantity of acetone may be found in various affections of the digestive system in children. But it does not lose its importance in this affection merely because it is common to others, and Marfan remarks on this point that acetonemia is the index of a disturbance of nutrition which may be produced under different circumstances. From this point of view it may be compared to glycosuria, and in the same manner it may constitute one of the elements which contribute towards defining a clinical entity. Although we have no precise knowledge of the part that acetone plays in the organism, we may admit that it is a manifestation of a disturbance of metabolism, and that it is this disturbance, the nature of which is at present unknown, that gives rise to this form of vomiting. We must therefore content ourselves with noting the constant presence of acetone without giving any theory as to its origin; in any case it is certain that the acetone is not due to the abstinence from food, since it has been shown to be present at the onset of the attack.

The marked characteristics which these attacks present from a clinical point of view have led to this syndroma of symptoms being considered as a definite morbid entity. Many are agreed on this point, but divergencies of opinion commence when it comes to settling the origin of the vomiting. While Comby and others see in this vomiting a manifestation of the arthritic

diathesis, others ascribe it to a hyperacidity of the gastric juice, and others to the acetonemia, and others to a neurosis of toxic origin. It is worth while to examine these views more closely.

The theory of Comby (*Arch. de Méd. des Enf.*, 1902), that the attack is a manifestation of the arthritic diathesis, is supported by the following arguments: First, the parents of the patients being as a rule either obese, gouty, or eczematous. No doubt an hereditary arthritic taint is often present, as is shown by the fact that this complaint has a predilection for the richer classes, to whom arthritism is a sort of natural endowment, but it seems venturesome to attribute the condition entirely to this heredity; secondly, the analogy between these attacks of periodic vomiting and those of migraine which occurs in arthritics. This analogy is hardly justified, for although a certain periodicity is a phenomenon common to both, the duration is entirely different, so that whereas the attacks of migraine are essentially transient, lasting a few hours, the crises of periodic vomiting are prolonged usually four or five days; thirdly, the possibility of the attacks of vomiting becoming converted into attacks of migraine. This argument is founded on a few cases reported by Rochford (*Arch. of Pediat.*, 1897, p. 661); numbers of others have been published in which nothing of a similar character has been noticed.

Snow and Whitney (*Arch. of Pediat.*, 1893 and 1898) believe in gastric neurosis, and think that hyperacidity and the absorption of ptomains can precipitate the attack and increase its intensity.

Edsall (*Amer. Journ. of the Med. Sciences*, 1903, p. 629, and *Arch. of Pediat.*, 1903) believes in a grave acid intoxication of a type frequently met with in diabetes mellitus and occasionally in several other affections, an intoxication whose origin cannot be precisely defined. He examined the blood of an infant affected with periodic vomiting and found it feebly acid, and attributes this loss of alkalinity of the blood to admixture of acid with it. He compares this fact with what happens in diabetic coma, when the increase of acetone, the production of diacetic and oxybutyric acids shows an acid intoxication. According to this observer there are probably two kinds of acidity, one due principally to faulty metabolism, the other due primarily to digestive disorders and exaggerated by disturbances of metabolism. A fact that gives support to

the theory is the success with which he has been able to prevent the development of the attacks by the administration of very large doses of diffusible alkalies. On this theory the acetone is merely the evidence of the existence of various acid toxic bodies, and not the direct cause of the vomiting, for acetone itself in order to be toxic would have to exist in the organism in very much larger quantities than have been found hitherto in the course of this affection.

Griffith (*Amer. Journ. of the Med. Sciences,* 1900, p. 553) bases his idea of a neurosis of toxic origin on the fact that in two of his cases generalized itching accompanied the attack and in another diffuse articular pain followed it. According to him a toxic substance is developed, either in the intestines or in the tissues, which is gradually poured into the circulation, where it accumulates. An attack happens as soon as the limit of tolerance of the organism is passed; the presence of acetone and indican is the proof of the profound metabolic disturbance and of the existence of toxins.

Of the numerous other hypotheses I can mention only a few. The true pathology and etiology of an affection can only be brought to light when the pathological anatomy has explained the clinical symptoms, and this naturally has not been done in the case of a disease like periodic vomiting, which has almost always a favorable issue. In America some autopsies have been published (Griffith, *Amer. Journ. of the Med. Sciences,* 1900, cxx, p. 557), but they are too few to enable definite conclusions to be drawn, rarely lending color to one theory or another.

Rotch (*Arch. of Pediat.,* 1897, p. 678) found an excess of albuminoids in the milk of a mother of a breast-fed infant who was attacked with periodic vomiting. By diminishing the quantity of nitrogenous food in the mother's diet the vomiting ceased.

Rochford and Whitney (*Arch. of Pediat.,* 1898) consider that an hereditary arthritic diathesis, besides producing uric acid, also produces poisonous leucomains closely related to the purin bodies, xanthin, paraxanthin, and heteroxanthin, which are diffusible, whereas uric acid is not; the gradual and periodic accumulation of their substances explain the paroxysmal nervous discharges which cause the vomiting. The disease thus becomes a "lithemic gastric neurosis."

Mery (*Soc. de Péd. de Paris,* 1899) sees in constipation the root of all this evil, but clinical facts do not bear out this

theory, for although constipation is as a rule present, it only makes its appearance during the course of the attack, and is rather to be attributed to the empty condition of the intestines, the result of the repeated vomiting. Since the beginning of 1905, and since the publication by Shaw and Tribe and by Langmead of their cases in the *British Medical Journal* (1905, pp. 347 and 350) two new theories have been brought forward in France by Richardière and by Broca. In the beginning of 1905 Richardière read a paper on the subject before the Société de Péd. of Paris (*La Pédiat. Pratique,* March, 1905, and *Brit. Journ. Child. Dis.*, 1905, p. 229). He attributes these attacks to insufficient function of the liver, being struck with the frequency with which signs of hepatic derangement were present in these cases, which take the form sometimes of single bilious vomiting, sometimes of a subicteric tint of the skin, and at other times of an attack of urticaria. In a certain number of the cases the liver is enlarged, in others it is tender. In several cases the hepatic symptoms have pervaded the clinical picture, the liver has been large and tender, the jaundice marked, the stools white, and the urine bile stained. Richardière is of opinion that the acetonuria itself, which is the most constant symptom in periodic vomiting, must be considered an hepatic sign indicating that the liver no longer destroys or prevents the formation of acetone in the system, and, according to him, the hepatic theory is capable of explaining the majority, if not the whole, of the cases of periodic vomiting. He states that from this point of view the facts arrange themselves into three groups. In the first are attacks of liver disturbance ending in the crises of vomiting which have as their cause the bilious temperament, family disposition to cholemia, and arthritism. In the second come attacks of periodic vomiting, in which the hepatic reactions are the result of intestinal disturbance, more particularly constipation. The third group comprises cases in which the functional disturbance of the liver is temporary, and determined by the onset of an infectious malady. But it is always the liver, directly or indirectly, which incites the crisis of vomiting. This theory would be seductive, by reason of its simplicity, if it were not based upon ideas as yet insufficiently proved, and it has been combated by Marfan (*La Clin. Infant.*, March, 1905, and *Brit. Journ. Child. Dis.,* 1905, p. 277), who expresses the opinion that attacks of periodic vomiting with acetonemia represent a distinct affection, which runs in

families; it is not uncommon to see a case in a child, and the next day or the day after a brother or sister would be attacked in the same way. He states, moreover, that the vomit is, as a rule, colorless, not bilious, and besides, the presence of bile does not necessarily imply participation of the liver; bile is found in the vomiting of renal colic; enlarged liver is often noticed, but is not constant; jaundice is a rare complication, and is probably secondary, as in pneumonia; hereditary cholemia also is not observed in all the cases.

Hutinel has elaborated and modified the hepatic theory, and rendered it plausible, though not proven. This theory may be thus summed up, as quoted by Giliberti (*Rev. Mens. des Mal. de l'Enf.*, 1905, p. 397): In the normal state toxins are formed in the system, which, partly modified by the liver, are at length eliminated. Each time that, at the end of a faulty action of the digestive system in general, the liver becomes incapable of modifying these toxins, or, if they themselves are produced in abnormal quantity, they then penetrate into the circulation. The reaction which follows is necessarily variable and bears a very limited relation to the organism attacked, for everyone does not react in the same way to the same stimulus. Sometimes this reaction betrays itself by a rise of temperature, sometimes by urticaria, sometimes by nervous phenomena, sometimes by vomiting, etc. The different observers who have studied periodic vomiting, according as they have found themselves in the presence of one of the aforesaid reactions, have attributed the origin of the attack to one organ rather than another.

Hutinel has in effect observed the attacks of periodic vomiting supervene in the course of an ordinary enterocolitis, and has been able to diminish their frequency and prevent them by a rigorous hygienic regimen. He has seen them happen in the case of three little girls who were strongly under the influence of nervous disturbance, and in whom this origin was evident; it was enough for one of them to be attacked with vomiting for the other two to be seized in the same way, just like what happens in chorea or in whooping-cough wards, where, if one child has a paroxysm, its neighbors follow suit. Hutinel has moreover seen, although rarely, periodic vomiting happen without apparent appreciable cause; but he believes that the nervous system plays an important part in these cases because the children in question have an hereditary nervous taint. Periodic vomiting, then, according to him, would not

be morbid entity, but a syndroma appearing in the course of various maladies, from common enterocolitis to hysteria. It may be objected to this theory that the name of periodic vomiting is not applicable to all the cases mentioned by Hutinel, but only to those where the vomiting occurred, as he himself admits, without apparent appreciable result.

The other recent theory is that of Broca (Soc. de Pédiat. de Paris, 1905, February the 14th), who sees in these attacks a manifestation of an undiscovered chronic appendicitis. This observer has seen five cases of children whose illness was diagnosed by competent clinicians as periodic vomiting, and whose symptoms disappeared after surgical intervention. One of his cases was a striking one—a girl, aged 8 years, who since the age of ten months had had attacks of vomiting with acetonemia every two or three months. A classical attack of appendicitis then ensued, and after it had subsided the appendix, which was large, hard, and the seat of folliculitis, was removed, after which the attacks of vomiting did not recur. The same result happened in the other four cases.

Marfan and Richardière, however, relate cases where just the contrary occurred, where the vomiting continued after the total ablation of the appendix, and maintain that appendicular lesions may co-exist with attacks of periodic vomiting, but that the relation of cause and effect between them is far from being proved.

To sum up, then, the most recent facts about the disease as stated by Comby, who gives statistics of thirty-four cases (*La Clin. Infant.*, March, 1905, and *Brit. Journ. Child. Dis.*, 1905, p. 277), that in two only was the appendix distinctly implicated, twenty-four were girls and ten boys, and the greater number of cases occurred between two and ten years of age. A relation exists between these attacks and those of migraine; sometimes they ceased and were replaced by those of migraine. As antecedents were found—gout ten cases, migraine thirteen cases, neuralgia three cases, and sometimes eczema. Only twice was enlargement of the liver noticed; jaundice was rare. Constipation existed in thirty cases. In six cases the attacks were afebrile. These cases were met with in children of a neuro-arthritic diathesis and among the richer classes. The disease seems therefore to be the effect of some toxic substances, the product, as yet unknown, of a defective metabolism, which accumulates in the tissues, and which, acting on an unstable nervous system whose limit of tolerance is reached, suddenly produces an attack.

Diagnosis is not difficult if we bear in mind the symptoms, the sudden onset, the vomiting without nausea resembling the regurgitation of cerebral affections, the appetite preserved in spite of the alarming general condition, and the smell of acetone in the breath and its presence in the urine. The two chief conditions likely to give rise to difficulty are repeated bilious vomiting and tubercular meningitis. The differential diagnosis from the former is thus given by Ely, quoted by Giliberti (*Rev. Mens. des Mal. de l'Enf.*, 1905, p. 418). In bilious vomiting there is history of errors in diet, action of the bowels is followed by relief, tongue coated, abdomen distended, abdominal colicky pains with increased peristalsis, clay-colored stools, and febrile urine; whereas in periodic vomiting there is no sign of previous indigestion or history of unsuitable diet, action of the bowels gives no relief, the tongue may be clean, the abdomen either normal or retracted, there is no colicky pain and no increased peristalsis, the stools are normal, and the urine contains acetone.

With regard to tubercular meningitis, attention is called to the following points. In periodic vomiting the illness commences suddenly; in tubercular meningitis, on the other hand, there is usually a prodromal stage. The vomiting is obstinately persistent in the former case, but is present only at the beginning of tubercular meningitis, and ceases during its course. The intelligence is always preserved in periodic vomiting, while in tubercular meningitis a sub-comatose condition soon supervenes. In those rare cases of tubercular meningitis where the special nervous symptoms, such as nuchal rigidity and Kernig's sign, are absent, lumbar puncture might be resorted to to settle the diagnosis.

The prognosis is almost always favorable; a fatal issue has been usually due to complications, of which the most frequent is nephritis. Langmead, however, reports a fatal case (*Brit. Med. Journ.*, 1905, p. 350) which occurred in a child in her fifth attack. The liver was large and in a condition of advanced fatty degeneration. Kidneys also fatty. There was no nephritis. The left suprarenal body contained a small wedge-shaped hemorrhagic focus. The mucous membrane of the posterior wall was mottled with dark red areas of hemorrhage. Beyond this there was nothing abnormal to the naked eye. The gastric glands were degenerate, and here also small hemorrhages were seen among the gland tubules. There was nothing that could not be attributed to inanition and fever and

to the terminal convulsions. The large size of the liver and its extreme fatty degeneration were, however, very suggestive.

Treatment has the double object of cutting short the attack and of preventing its occurrence. The only specific treatment founded on a conception of the pathology of the affection is that of Edsall, who considers it due to an acid intoxication. He gives a diffusible alkali such as bicarbonate of sodium in large doses, 15 grains every two hours, or 3 ounces in the twenty-four hours. This somewhat heroic treatment seems to have been successful in other hands. Pierson, for instance (*Arch. of Pediat.*, 1903), claims to have cut short the attack by giving it in what he considers to be a prodromal period. Shaw and Tribe give 1½ to 2 drachms daily in their case (*Brit. Med. Journ.*, 1905, p. 347), with rectal feeding and massage; the case recovered, although, as they state, the vomiting itself seemed to have been more marked while the patient was taking it.

Griffith gave phosphate of sodium without marked success, and all observers are agreed as to the advisability of regulating the diet and bowels, and of improving the general condition by hydro-therapy, exercises, and fresh air. Marfan states that injections of morphine have proved beneficial in allaying the vomiting, and recommends giving alkalies in some form or other combined with bromide of sodium, under which treatment the attacks have been observed to become shorter and less severe.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

Syphilis, Aortic Lesions, Tabes Dorsalis and Babinski's Sign.

The co-existence of tabes dorsalis and aortic lesions in the same person has for some time been a matter of experience, but the relation between the two states has been variously interpreted. Some look upon the one as the cause of the other. Grasset regards the disease of the spinal cord as primary. Berger and Rosenbach, who were among the first to show the co-existence of the two conditions, did not give any opinion as to the relation between them. Raynaud, Leyden, Borgberine, consider the co-existence as simply a fortuitous complication, or at the most, due to the cause which has produced the tabes.

Ruge and Huffuer recently published 138 cases of tabes. Among these they found twelve with cardiac lesions (8.7 per cent.). Of these nine were cases of aortic insufficiency, two of mitral insufficiency, with slight changes in the aortic valves, one case of mitral stenosis. In the greater number of the cases there was a previous history of syphilis. There was such a history in exactly eleven of the twelve cases where the tabes co-existed with cardiac lesions. Their opinion was that syphilis was the cause of both diseases. Oppenheim held the same view. Recently Lamberger, out of ten cases of tabes associated with cardiac lesions, found aortic insufficiency nine times.

From all these observations we may make the following deductions:

1. If, in a case of tabes, there appears a cardiac lesion, it is almost always an aortic lesion.

2. Between tabes and aortic insufficiency there exists a frequent relation, in the sense that they are found associated in patients suffering from syphilis.

Now, granted such a coincidence, may we claim, as some authors do, that the aortic insufficiency is the result of a trophic disturbance of nervous origin, analagous to those other disturbances which we find in so many organs, in cases of tabes? In general, we must consider as the cause of the aortic valvular

lesions the action of syphilis, which at the same time has produced the tabes.

At other times we meet aortic lesions and syphilis, without ataxic phenomena, but with indications of a syphilis of the nervous system. Examining the pupils we find the Argyll-Robertson sign or perhaps a slight inequality of the pupils; the patellar reflexes are but little changed. The syphilis of the nervous system is shown in an abundant leucocytosis of the spinal fluid.

The combination of these symptoms—the aortic lesion, the pupillary changes, the lymphocytosis of the spinal cord—constitutes Babinski's sign. The existence of such a combination ought to make one suspect syphilis as the common cause. Moreover, the systematic search for such a cause in all aortic cases will often bring to light some lesion of the nervous system previously undiscovered. It is not necessary, therefore, to attribute pupillary changes in a case of aortic lesion to a pressure caused by aneurysm. The diagnosis of aneurysm cannot be established on the basis of inequality of the pupils or unilateral Argyll sign in an aortic case. Syphilis must be considered as a cause, and this has its practical importance. Specific treatment must be instituted. An aortic lesion with pupillary changes must be treated with mercury. In such treatment we must, however, be prudent, since cases of syphilitic aorta have sensitive kidneys. To submit them to a vigorous mercurial treatment might give rise to grave renal disturbances.—Translated from *Giornale Internazionale delle Scienze Mediche* by HARLEY SMITH.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Pelvic Appendicitis

In the *British Medical Journal* of Jan. 13th, 1906, there appears some interesting and valuable clinical remarks by Dr. George E. Armstrong, of Montreal, on pelvic appendicitis and the importance of rectal examination in such cases. He points out the fact that owing to uncertain diagnoses, operation is often too long delayed, for, though there is the usual sudden onset, generally attended by nausea and perhaps vomiting, the pain is often more generalized and tenderness on pressure is

more marked over the pelvic than the iliac region, and there is only a moderate elevation of temperature and acceleration of pulse. Under such circumstances the diagnosis is often uncertain and delay is attended in from twenty-four to forty-eight hours by improvement, but often after a period of two, three or four days, there occurs a sharp recrudescence, with rapid development of peritonitis.

In all suspected cases where the diagnosis of appendicitis can not be definitely made by abdominal examination, Dr. Armstrong advises as a routine measure rectal and bimanual examination, claiming that in cases of pelvic appendicitis it is often possible to palpate a tender mass per rectum and bimanually, or to elicit distinct tenderness without the presence of a mass, and so to make the diagnosis definite. Several cases are quoted in which the diagnosis was made in such manner. Study of these and the employment of the method advised will readily convince any one that the advice is commendable. Perhaps too much stress has been placed upon the so-called "McBurney's point." For a practical knowledge it would be more advantageous to forget any such point and remember that the direction of the appendix is subject to variations, the three most common directions in their relative order being the "north-east," the "south-east," and the "north," and that the most tender point should be one at which the appendix may be directly pressed upon. In view of this it must be admitted that if the appendix lies in the "south-east" direction, with its tip hanging down into the pelvis, and if it be the distal portion which is diseased it will often be difficult to elicit distinct tenderness per abdomen, and in such cases it should, as a rule, be possible to do so per rectum. F. W. M.

On Gastric Carcinoma.

Not long since the percentage of cases in which carcinoma supervened upon gastric ulceration was regarded as being little more than six. Much has been learned of late with regard to the pathology of certain diseases, and especially those of the stomach, the gall-bladder, the bile ducts, the pancreas, and the appendix, from what Professor Hans Kehr has designated "pathological-anatomical studies *in vivo*," meaning thereby a study of conditions found to exist during the performance of operations.

It is interesting to note in this connection that Mr. Moynihan, of Leeds, in "a review of a series of operations for cancer

of the stomach" (*British Medical Journal,* Feb. 17th, 1906), states that in the last twenty-two patients of the series submitted to the operation of gastro-enterostomy, and from whom careful enquiry was made, there was a history of previous gastric ulceration in sixteen, or over 72 per cent. In seventeen other cases undergoing gastrectomy, gastrostomy, or jejunostomy, this feature was recorded in eight. In twenty of his earliest cases the history of gastric ulceration was either not enquired for or its presence or absence was not recorded. Thus in the whole series thirty-nine cases showed such a pre-existing condition in twenty-four, or over 61 per cent.

Such circumstances as these alone, apart from various other indications, should warrant the early employment of operative procedures in cases of intractable gastric ulceration. Though Mr. Moynihan regards an exploratory operation as a confession of diagnostic failure, yet he asserts that with present clinical methods, positive recognition of cancer of the stomach in its early stage, that is, in the stage when it could be completely eradicated, is almost impossible, and he advocates that if the clinical history of a case is such that suspicions created at the first are not quickly allayed or definitely explained in a complete clinical investigation, an exploratory operation should be undertaken for the purpose of making the diagnosis. In this regard he thinks it probable that, as in other matters, the comparison of the history and of the conditions revealed at operation will lead by degrees to greater assurance in diagnosis.

F. W. M.

Functions of the Omentum.

Most surgeons who in their operative technique are careful to expose to view the parts concerned in an abdominal operation have been impressed by the almost unfailing presence of omentum. More especially has this been so in connection with the localization of inflammatory processes, though from its frequent presence in hernial sacs and in many such cases entirely blocking the hernial ring, it would appear to protect the abdominal viscera in other ways as well.

In the *British Medical Journal* of Jan. 13th, 1906, there appears a short paper on this subject by Mr. Rutherford Morrison, of Newcastle-on-Tyne, whose observations on the omentum have been deducted from a large operative experience. The paper consists largely of some seventeen diagrammatic drawings which serve well to illustrate the tendency and capa-

bility of the omentum to migrate to the seat of any trouble within the peritoneal cavity.

The drawings illustrate the normal omental apron and the performance by the omentum of the following functions: Occluding the sac of a femoral, an inguinal, and of an umbilical hernia; occluding a hole in the diaphragm; guarding a suppurating gland in the mesentery of the small intestine; isolating a suppurating gall-bladder; isolating the appendix in the iliac fossa, the pelvis or the flanks; guarding malignant ulcers of the colon or rectum; surrounding an injured piece of small intestine; sealing an ulcer of the stomach and one of the duodenum, and isolating a pelvic tumor, such as a degenerating myoma, an ovarian cyst, an ectopic gestation, or a pyo-salpinx.

Mr. Morrison believes there is something more than a mechanical causation in the movement of the omentum, and likens its movement to that of a jelly-fish. His paper demonstrates clearly the vast importance of the omentum from the point of view of protection, and most surgeons will readily recall peculiar instances in which the omentum seemed to be the saving factor in the case. F. W. M.

The Choice of Method in Operating Upon the Hypertrophied Prostate.

Dr. Willy Meyer, in *Medical Record*, October 7th, 1905, says:

There has been much bickering, of late, among surgeons, as to which of the three operations, Bottini's, suprapubic, prostatectomy and perineal prostatectomy is the best. Surgeons vie with each other in announcing the respective mortalities of their favorite method. Meyer's standpoint is that all three are of value; each has its advantages and disadvantages and its own indications. The Bottini operation is reserved for patients who refuse the cutting operation, and for carcinoma. Meyer admits, however, that the ultimate functional result is not as good after this operation as after the other two, and prefers to do a cutting operation when he can. Between the suprapubic and the perineal methods Meyer believes that up to the present the choice is largely an individual one, depending on the experience and personal skill of the operator. The number of cases that have been operated upon up to the present, is still too small to permit of forming exact indications for deciding upon one or the other method. The author has summarized the following indications, based upon present experi-

ences: 1. Glands palpable per rectum and rising not far from the sphincter can be advantageously attacked from below. 2. If situated higher up, they should be enucleated from above, especially if the cystoscope has shown the presence of a median lobe. 3. An hypertrophy of soft character in the early stages is best attacked from below. 4. In 33 per cent. of the cases, where no tumor is palpable per rectum, and where the enlargement can be diagnosed only by the symptoms and by cystoscopy, the suprapubic route is preferable. 5. If the hypertrophy is accompanied by calculus, especially by one that is too large to permit of removal through the internal sphincter, the suprapubic route is indicated. 6. If the urine is foul, requiring immediate drainage, it is better to operate from above; the extirpation can be done at a second sitting. 7. The comparatively frequent appearance of carcinoma of the prostate may prove to become an important factor in deciding in favor of complete removal suprapubically. In Meyer's experience the suprapubic operation is less frequently attended by loss of sexual function than the perineal. This question must be decided by future experience and if this opinion is corroborated it may be an additional factor in deciding on the suprapubic route. Cystoscopy must be done before performing the Bottini or the perineal operation. For the suprapubic route it may be dispensed with. It should never be neglected in cases where no enlargement is palpable per rectum. The time for operation arises when regular catheterization has become imperative. The only exception is in the cases of well-to-do patients, who can command the time and proper asepsis for catheterization. As a result of Meyer's observations, he recommends that surgeons should familiarize themselves with all three operative methods, because no one method can be employed in all cases to the best advantage of the patients.

The Treatment of Peritonitis.

Friederich emphasized that the variability of the prognosis depended largely on the variation in etiology. There is only one contraindication to operation in acute diffuse peritonitis and that is beginning paralysis of the medullary centres (cyanosis, imperceptible pulse, cold extremities). He advocates heated tables, light general anesthesia, preferably ether, no evisceration, enterotomy only when the distension is extreme. The location of the incision will depend on the diagnosis. After-treatment consists of lavage, salts, large quantities of salt solution, artificial alimentation. Krogius insists

on early operation. Irrigation is indicated only where chemically harmful fluids (such as stomach contents, or food particles) are found in the peritoneal cavity. He believes in free packing (Mikulicz tampons), counter-incisions in Douglas' pouch, the loin, etc. If later symptoms of obstruction develop, he makes an enterostomy after the method of Witzel. Lennander considers intestinal paresis the chief danger and consequently performs enterotomy, or in extreme cases resects ½-2 meters of paralyzed intestine. He uses a cigarette drain. Post-operatively this surgeon has great faith in large saline injection, and in subcutaneous alimentation of sterile olive oil or solutions of sugars. Lejars spoke of the less common causes of the infection, such as those through the female generative tract, blood infections, etc. He mentioned recent attempts to use horse serum and nucleic acid to increase the resistance and promote leucocytosis. Although on principle opposed to irrigation, he finds it of use where the infection is diffuse and no adhesions have formed. The Fowler position appeals to him, and also all methods for evacuating the intestinal contents. McCosh refuses to operate on moribund patients as interference only hastens the fatal result. He has grown more conservative and operates only in about 50 per cent. of all cases. When operation is undertaken great speed is essential, one-half hour being the maximum duration of operation. Light chloroform anesthesia is preferred; small incisions, evacuation of the fluid, removal of the etiological factor; irrigation only if the infection is very diffuse, application of a cigarette drain. McCosh rejects enterostomy, frequently uses injections of concentrated solutions of magnesium sulphate into the gut, and considers tamponing injurious. The Fowler position has its advantages. Twenty-seven per cent. of cases, which surely would have died if operated upon, recovered under medical treatment.

Dudgeon and Sargent took up the bacteriology of the subject. Colon bacilli are the most frequent and fatal, but b. pyocyaneus and streptococcus pyogenes also cause grave inflammations. The b. coli become very virulent in diseased gut, hence their hypervirulence in strangulations, etc. The staphylococcus albus increases leucocytosis and hence if found in combination with the other varieties it improves the prognosis. In streptococcic peritonitis irrigation is indicated; in b. coli infection, limited operation. In diffuse infections drainage proves of little value. Purgation is important. Temoin drains only when there are raw surfaces capable of producing pus.—*Am. Jour. of Surgery.*

Editorials.

CANADIAN HOSPITALS IN INDIA AND CHINA.

Twice within the past month the CANADIAN PRACTITIONER has been asked to assist in finding physicians for India and China. Appointments are open in two important Mission Hospitals, and women physicians especially are urgently required. The Woman's Missionary Society of the Methodist Church has an important work in West China and wishes to send out a doctor at once.* The Zenana Bible and Medical Mission† (interdenominational), which is the oldest society working among the women and girls of India, has now a Canadian auxiliary, which supports a hospital at Nasik, in the Bombay Presidency. The work in this hospital has increased so greatly that the doctor must have an assistant, and naturally the Auxiliary wishes to send out a Canadian doctor. The work in Nasik is not only large, it is successful, and acceptable to the people, who have themselves provided the hospital building and grounds. One of the Hindu patients said of the hospital: "That is the house where those who enter weeping, leave it laughing."

DEAN GEIKIE'S SEMI-CENTENARY.

In 1856, just fifty years ago, Dr. W. B. Geikie became Professor of Materia Medica in Victoria University, Cobourg, in which institution he afterwards held the chairs of Anatomy, Surgery, and Midwifery. In 1870 he became Professor of Medicine and Clinical Medicine in the Medical Faculty of Trinity University, Toronto, a position which he held until the confederation with the Medical Faculty of the University of Toronto occurred. He was Dean of Trinity Medical College

*Further information may be obtained from Mrs. Strachan, 50 Markland Street, Hamilton.

†Further information may be obtained from Mrs. Hodgins, 92 Pembroke Street, Toronto.

from the year 1878, and in every way identified himself with the College and its interests.

Dr. Geikie belongs to an Edinburgh family and the distinguished Biblical scholar, the late Dr. Cunningham Geikie, was his brother. He came to Canada in 1843, and was licensed to practice medicine by the Medical Board of Upper Canada in 1851. Dr. Geikie also holds the degree of M.D. from Jefferson College, Philadelphia, and is L.R.C.P. Lond. and F.R.C.S. Edin. He received the honorary degree of D.C.L. from Trinity University in 1889. Dr. Geikie has always taken an active interest in religious and philanthropic work in Toronto, and is one of the best-known medical practitioners in Canada.

A pleasing incident marked Dean Geikie's semi-centenary, on the occasion of his acting as presiding examiner for the Trinity students who, having registered before amalgamation, were writing on their finals at Trinity University. Before the examination began, these students took the opportunity to present him with an address and a gold-headed cane, suitably inscribed. The address expressed their appreciation of Dean Geikie's services to medical education and his devotion to Trinity.

THE SAN FRANCISCO CATASTROPHE.

The earthquake and fire which destroyed the fair city of San Francisco will be remembered in history among the most appalling disasters of modern times. Of the sufferings of every citizen of that city, the loss of those who lost all, and the heroism with which they bore it and turned so soon to the herculean task of re-building what had been swept away in a moment, one can hardly speak adequately.

Few physicians in Ontario had not friends or acquaintances in or near San Francisco. Many had relatives about whose safety they were anxious, and it was, therefore, a great relief when accounts came from Dr. Philip M. Jones and Dr. D. W.

Montgomery of the safety of many physicians and others known in Ontario.

The President of the San Francisco County Medical Society estimates that about one thousand physicians have lost offices, books, instruments, in fact, everything, and great efforts are being made by the profession to assist them. Members of the different medical associations have already subscribed some thousands of dollars; one medical society has voted to omit the annual banquet and give the money for the benefit of their colleagues in San Francisco, and the women physicians of Philadelphia gave a benefit for the women physicians of San Francisco in the Broad Street Theatre on May 29th.

In San Francisco itself, considering the great danger of the city from a sanitary point of view, with sewers and water supply practically gone, the condition is excellent.

The death-rate, it is true, is double the normal number, but there are only 47 cases of contagious disease in the city, chiefly measles and scarlet fever. No cases of typhoid have yet been reported, but a typhoid hospital for 1,200 patients has been erected in Golden Gate Park. On the day of the disaster only one out of the three City Emergency Hospitals (the Harbour Emergency) escaped. A temporary Emergency Hospital was established by utilizing the Mechanics' Pavilion. This, too, was burned and had to be abandoned, but the patients were all taken in safety to the Presidio, the German Hospital, and the California Women's Hospital. The city has been divided into three sanitary districts, under the chargé of Drs. Jones, Barbat and Williamson, each of whom is aided by a staff of physicians and inspectors, who make house-to-house inspections daily and see that sanitary instructions are carried out. Thus the medical profession have ably seconded the heroic efforts of the military and civil authorities, and have done nobly, nurses and doctors remaining on duty at hospitals till ordered to leave by the military, and aiding in every way in the work of rescue and re-organization.

THE BRITISH MEDICAL ASSOCIATION.

TORONTO MEETING, AUGUST 21ST. TO 25TH, 1906.

Considerable progress has been made with the arrangements for that notable event, the meeting of the British Medical Association in this city in the closing part of August. From the enquiries that are being received from every part of the continent, as well as from the British Isles, it is evident that a very large attendance will be recorded at this meeting. Over 200 members resident in the British Isles have already asked for accommodation, and in many cases they will be accompanied by members of their families. The Association will be convened under thirteen sections, which will meet daily from 9.30 to 1 o'clock. The afternoons and evenings will be devoted to general meetings, public addresses and various entertainments. There will be three public addresses delivered. Sir James Barr will present the address in Medicine, his topic being, "The Circulation Viewed from the Peripheral Standpoint." Dr. W. S. A. Griffith will deliver the address in Obstetrics, Sir Victor Horsley the address in Surgery, and it is just possible that a public address will be delivered by Dr. Marie, of Paris. It is intended that clinics shall be held each morning at 8.30, when interesting cases will be reviewed by some of the prominent physicians and surgeons in attendance. Considerable advance has already been made in arranging for the work of the sections.

Anatomy.—The section of Anatomy will be under the presidency of Dr. Arthur Robinson, of Birmingham. Papers have been promised by the following: Dr. C. R. Bardeen, University of Wisconsin, Madison, Wis.; Prof. G. C. Huber, University of Michigan, Ann Arbor, Mich.; Prof. J. P. McMurrich, University of Michigan, Ann Arbor, Mich.; Dr. Ross E. Harrison, Johns Hopkins, Baltimore, Md.; Dr. H. Knower, Johns Hopkins, Baltimore, Md.; Dr. G. L. Streeter, Johns Hopkins, Baltimore, Md.

It is also possible that Prof. Mall, of Johns Hopkins, Baltimore; Prof. C. S. Minot, Harvard Medical School, Boston; Dr. E. A. Spitzka, New York, and Dr. R. R. Bensley, of Chicago, may communicate papers.

Laryngology and Otology.—The section of Laryngology and Otology will be under the presidency of Dr. J. Dundas Grant, of London, and will have three or four principal topics for discussion:

1. "Operations for the Correction of Deviations of the Nasal Septum." (Discussion to be opened by Dr. St. Clair Thompson, of London.)

2. "Laryngeal Disturbances Produced by Voice Use."

3. "The Indications for Ligation of the Jugular Vein in Otitic Pyemia."

4. "The Diagnosis and Treatment of Ethmoidal Disease."

Each discussion will occupy about two and a half hours, the remainder of the day being devoted to papers. It is just possible that Dr. Logan Turner will open the discussion on "Ethmoidal Disease."

Medicine.—Tuesday, Aug. 21st: "Blood Pressure in Its Relation to Disease." (*a*) Physiological Introduction (Dawson, of Baltimore). (*b*) Clinical Methods of Determining Blood Pressure; Their Uses and Limitations (Geo. Gibson, Edin.). (*c*) Pathology and Therapeutics of Blood Pressure (Sir Wm. Broadbent). Also possibly a paper on the subject by Clifford Allbutt, and one or two others, including one Canadian.

Wednesday, Aug. 22nd: Discussion in junction with the section of Physiology upon "Over and Under Nutrition, with Special Reference to Proteid Metabolism." Introduced by Chrittenden. Other special speakers: Herter, Starling, Hutchison, Francis Hare, A. Haig, and others.

Thursday, Aug. 23rd: Papers from William Osler, J. Mackenzie, and Erlanger on "Heart Block." Other papers: L. F. Barker, A. Stengel, A. McPhedran.

Friday, Aug. 24th: Papers devoted to neurological subjects. W. G. Spiller, "Syringomyelia." J. J. Putman.

The following gentlemen have signified their intention to contribute to the section: Dr. J. J. Putman, Boston, Mass.; Dr. W. G. Spiller, Philadelphia, Pa.; Dr. Alfred Stengel, Philadelphia, Pa.; Dr. Barber, Baltimore, Md.

Obstetrics and Gynecology.—The section of Obstetrics and Gynecology is under the presidency of Dr. A. H. Freeland Barbour, of Edinburgh. The following is the programme suggested:

Tuesday—Discussion on "Hyperemesis Gravidarium." Opened by Dr. J. C. Cameron, Montreal.

Wednesday—"The Changes in Uterine Fibroids after the Menopause, with Special Reference to Operations."

Thursday—Subject for discussion and opener to be selected by Dr. Barbour.

Papers—"Uterine Myomata and Their Degenerative

Changes," T. S. Cullen; "Sectional Anatomy of Labor," (lantern demonstration), A. H. F. Barbour; "Condition of Ovaries in Normal and Abnormal Pregnancy," C. Lockyer (lantern demonstration).

Surgery.—The section of Surgery is under the presidency of Sir Hector Clare Cameron, M.D., Glasgow. The following is the programme suggested:

Tuesday—"Enucleation of the Prostate Gland." Reader, Dr. Bingham, Toronto.

Wednesday—"Treatment of Ascites Secondary to Chronic Hepatitis."

Thursday—"Surgical Treatment of Ulcer of the Duodenum." Reader, Dr. W. J. Mayo, Rochester, Minn.

Friday—"Treatment of Acute Septic Peritonitis."

Pediatrics.—The section of Pediatrics is under the presidency of George A. Sutherland, M.D., London. The following is the programme suggested:

Tuesday—Discussion on "Congenital Pyloric Stenosis." The medical aspect of the subject will be introduced by Dr. Edmund Cautley, London, and the surgical aspect by Dr. Harold Stiles, Edin.

Wednesday—Discussion on "Pneumococcal Infection." The medical aspect will be introduced by Dr. Henry Ashby, Manchester.

Thursday—A Symposium on "Entero-colitis." The subject will be taken up under the following headings: (*a*) Etiology, (*b*) Pathology, (*c*) Symptoms, (*d*) Diagnosis and Prognosis, (*e*) Medical Treatment, (*f*) Dietetic Treatment.

Friday—A Discussion on "Rheumatism."

Psychology.—The section of Psychology is under the presidency of Wm. Julius Mickle, M.D., London. It has been arranged to have four discussions, one each day of the sectional meetings. The subjects are:

Tuesday—"General Paresis."

Wednesday—"Classification of Insanity."

Thursday—"So-called Mental Degeneracy."

Friday—"Dementia Precox."

The leaders and those chosen to discuss these subjects will be eminent British, American and Canadian psychologists, and the President, Dr. Mickle, is expected to present the first paper, as he is a recognized authority on general paresis. The second subject chosen will be one of great interest to both countries, as it is a question now under general discussion.

A series of papers will also be presented by eminent men,

and the following Canadians have already signified their intention to take part: Dr. C. K. Clark, Toronto; Dr. Ryan, Kingston; Dr. Moher, Brockville; Dr. Sherris, Montreal; Dr. Daniel Clark, Toronto.

State Medicine.—The section of State Medicine is under the presidency of Dr. F. Montizambert, of Ottawa. The following programme has been arranged:

Tuesday—"The Prevention of Tuberculosis."

Wednesday—"Water Supplies."

Thursday—"The Hygiene of Homes and Educational and Industrial Institutions."

Friday—"International Sanitary Protection."

Guests.—Prof. Brouardel, member of the Institute and the Academy Medicine of France; Dr. Mattin, City Health Officer of Paris, France; Dr. Letulle, Prof. of the Medical Faculty of Paris; Dr. Liceaga, Sanitary Adviser of the Government of Mexico, Mexico; Dr. Wyman, Surgeon-General of the United States Public Health and Marine Hospital Service, Washington.

Therapeutics.—The section of Therapeutics is under the presidency of Donald MacAlister, M.D., Cambridge. The following is the programme arranged:

Tuesday—The Study of the Kidney: (*a*) Its Physiology and Pharmacology; (*b*) The Therapeutics of Acute Nephritis; (*c*) The Treatment of Chronic Nephritis; (*d*) The Treatment of Uremia.

Wednesday—"Serum Therapy."

Thursday—"The Place of Materia Medica and Therapeutics in the Medical Curriculum," Dr. A. D. Blackader, Montreal; "The Teaching of Pharmacology"; "The Teaching of Therapeutics."

Pathology and Bacteriology.—The section of Pathology and Bacteriology, under the presidency of Professor J. G. Adami, M.D., F.R.S., Montreal, have made the following preliminary arrangements:

Tuesday—"Nuclear Physiology and Pathology." To be opened by Professor Adami and Dr. Macallum.

Wednesday—"Etiology and Life-History of Malignant New Growths."

Thursday—"The Forms of Arteriosclerosis, Their Classification and Experimental Production."

Friday—Papers upon "Pathogenic Protozoa" by various workers. Papers have been promised by Prof. Aschoff, Marburg, Germany; Prof. Novy, Ann Arbor; Dr. Pearce, Bender

Laboratory, Albany; Dr. Bushnell; Prof. Grunbaum; Prof. Calder Leith; Dr. Oskar Koltz, Montreal; Prof. J. J. Mackenzie, Toronto.

The American Association of Pathologists and Bacteriologists have been formally invited to be present, and a number of the members will likely attend.

Dermatology.—This section will meet under the presidency of Dr. Norman Walker, of Edinburgh, who will open the section by an address on "The Teaching of Dermatology." During one of the days of the meeting there will be a discussion on the subject of "Eczema," to be opened by Dr. A. J. Hall, of Sheffield, Eng. A paper on "Psoriasis and Light" has been promised by Dr. J. N. Hyde, of Chicago. Papers will also be given by Dr. Gilchrist, Baltimore; Dr. A. R. Robinson, New York; Dr. Elliott, New York.

Physiology.—The section of Physiology will meet under the presidency of Professor W. D. Halliburton, M.D., F.R.S., London. The following programme has been arranged:

Discussions: (1) Discussions in junction with the section of Medicine on, "Over Nutrition and Under Nutrition, with Special Reference to Proteid Metabolism in Health and Disease"; (2) Discussion in junction with the section of Pathology on, "The Role of the Nucleus in Nutrition."

Papers: Dr. S. P. Beebe, New York, on "Serum under the Influence of Injected Nucleo-proteid"; Prof. T. G. Brodie, F.R.S., London, on "The Functions of the Renal Tubules and Glomeruli"; Prof. F. Gotch, F.R.S., Oxford, on "Demonstration of the Sphinthariscope"; Prof. W. B. Hall, Chicago, on "New Apparatus"; Prof. W. D. Halliburton, F.R.S., London, on "Proteid Nomenclature"; Prof. C. F. Hodge, Worcester, Mass., on "Structures and Physiological Functions of Amœba Proteus"; Profs. C. F. Hodge and M. F. Duncan, Worcester, Mass., on "Differentiation of Contractile Protoplasm"; Prof. W. H. Howell, New York, on "Physiology of Heart"; Prof. G. C. Huber, Ann Arbor, on "Physiology of Renal Tubules"; Dr. G. T. Kemp, Champaign, Ill., on "Blood-platelets"; Dr. Louis Lapicque, Paris, on "Electrical Excitation of Nerves and Muscles"; Prof. J. S. Macdonald, Sheffield, on "Structure and Functions of Nerve Fibres"; Prof. J. J. R. MacLeod, Cleveland, on "Experimental Glycosuria"; Dr. Gustav Mann, Oxford, on "A Plea for Micro-physiology"; Prof. B. Moore, Dr. M. Edie, Dr. Spence, and Dr. H. E. Roaf, Liverpool, on "Experimental Glycosuria"; Prof. B. Moore, E. Whitley, and Dr. H. E. Roaf, Liverpool, on "Effect of Ions on Growth and

Cell Division"; Dr. F. W. Mott, F.R.S., London, on "The Functional Significance of the Convolutional Pattern in the Primates"; Dr. Maurice Nicloux, Paris, on "Chloroform Anesthesia and a Simple Method of Estimating Chloroform"; Prof. C. S. Sherrington, F.R.S., and Dr. H. E. Roaf, Liverpool, on "Lock-jaw"; Prof. F. S. Lee, New York, on "The Causes of Fatigue in Certain Pathological States."

Papers are also promised by the following: Dr. Harvey Cushing, Baltimore; Dr. P. T. Herring, Edinburgh; Dr. F. G. Hopkins, F.R.S., Cambridge; Prof. Waldemar Koch, Columbia, Mo.; Dr. S. J. Meltzer, New York; Dr. Sutherland Simpson, Edinburgh; Prof. L. B. Mendel, New Haven; Prof. Porter, Boston; Prof. Jacques Loeb, Berkeley, Cal.

Ophthalmology.—The section of Ophthalmology will meet under the presidency of Robert Marcus Gunn, F.R.C.S., London. The following provisional programme has been arranged:

Tuesday—"Rare Forms of Choroiditis."

Wednesday—"Sympathetic Ophthalmia."

Thursday—"Affections of the Lacrimal Passages."

Friday—"Visual Tests for Marine and Railroad Service."

Most of the buildings of the University will be utilized in connection with the meeting. On the ground floor of the Main Building, in addition to the Post Office and Reception Rooms, there will be rooms for the regular meetings of some six or eight sections. The second floor, in addition to special offices for the Secretary and the Editor of the *British Medical Journal,* will be devoted almost entirely to the Museum, which will afford some 12,000 square feet for exhibitors. Already a large amount of this space has been disposed of to leading manufacturers of instruments and drugs in Great Britain, the United States and Canada. This alone will be one of the most interesting parts of the Association to Canadian visitors. Accommodation for other sections will be provided in rooms closely adjoining the Main Building. It is expected that the new Convocation Hall will be completed in sufficient time to enable the ceremonies of the official reception, on the evening of the 21st of August, and the public addresses, to take place there. Already the Committee is actively engaged in providing accommodation for the host of visitors that is expected. Queen's Hall, Wycliffe College, Annesley Hall, the Fraternity houses, and other buildings adjacent to the University will probably be utilized, and many of the citizens are already offering their hospitality.

The Committee on Entertainment have a most excellent programme prepared, one of the interesting features of which will be an excursion to Niagara Falls at the invitation of Sir Henry Pellatt. Owing to the exceptionally favorable travelling rates which have been obtained over the Canadian lines of steam and rail, the attendance will be made very easy, and physicians wishing to avail themselves of the privileges of this meeting should communicate with the Secretaries at an early date, in order to obtain accommodation.

The following is a list of some of the prominent English members who will attend the meeting of the British Medical Association:

Allbutt, Prof. Clifford, F.R.S., St. Radegund's, Cambridge. Regius Professor of Medicine, Cambridge.

Armour, Donald, Esq., F.R.C.S., 89 Harley St. W. Son of Judge Armour.

Ashby, Dr. Henry, 13 St. John St., Manchester. An authority on diseases of children.

Barbour, Dr. A. H. F., 4 Charlotte Sq., Edinburgh. Son-in-law of the late Hon. Geo. Brown. An authority on obstetrics

Barlow, Sir Thomas, Bart., K.C.V.O., M.D., 10 Wimpole St. W. The King's physician.

Barnes, Dr. Henry, LL.D., 6 Portland Place, Carlisle. Ex-President, and an authority in obstetrics.

Barr, Sir James, M.D., 72 Rodney St., Liverpool. President of section in medicine.

Bradford, Prof. J. Rose, M.D., F.R.S., 8 Manchester Sq., W. An authority in medicine.

Broadbent, Sir William, Bart., K.C.V.O., M.D., 84 Brook St. W. An eminent authority on the heart.

Browne, Dr. Langley, Moore House, West Bromwich. President of Council of British Medical Association.

Buzzard, Dr. E. Farquhar, National Hospital, Queen Sq., W.C. An authority on nervous diseases.

Cameron, Sir Hector Clare, M.D., 200 Bath St., Glasgow. One of Scotland's famous surgeons.

Gibson, Dr. G. A., 3 Drumsheugh Gardens, Edinburgh. A representative of the Royal College of Physicians, Edinburgh.

Griffith, Dr. W. S. A., 96 Harley St. W. An authority on obstetrics.

Halliburton, Prof. W. Dobinson, M.D., F.R.S., 17 Marylebone Road, N.W. One of the world's most able physiologists.

Horsley, Sir Victor, F.R.S., 25 Cavendish Sq. W. Whose name is famous in brain surgery.

Lawford, Dr. J. B., 99 Harley St. W. A noted oculist.

MacAlister, Dr. Donald, D.C.L., Barrmore, Lady Margaret Road, Cambridge. The eminent Cambridge professor.

Manby, Sir Alan Reeve, M.V.O., M.D., East Rudham, Norfolk. Already well known to some Toronto people.

Mickle, Dr. W. J., Grove Hall Asylum, Bow E. A Toronto boy who has become an authority as an anatomist.

Osler, Prof. W., M.D., F.R.S., 7 Norham Gardens, Oxford. Too well known here to need description.

Roaf, Dr Herbert E., Bio-Chemical Dept., The University, Liverpool. One of Toronto's sons doing good work in Liverpool.

Robinson, Prof. Arthur, M.D., The University, Liverpool. A well-known anatomist.

Sherrington, Prof. C. S., M.D., F.R.S., Physiological Laboratory, The University, Liverpool. Already well-known in Toronto.

Woodhead, Prof. G. Sims, M.D., F.R.C.S.E., 6 Scroops Terrace, Cambridge. An eminent pathologist.

Distinguished Foreigners Who will be Present.

M. le Docteur Delezenne, Directeur du Laboratorie de Phsyiologie de l'Institut Pasteur, 25 Rue Dutot, 15e Arrondissement, Paris.

M. le Docteur L. Lapicque, 6 Rue Dante, 5e Arrondissement, Paris.

M. le Docteur M. Nicloux, 107 Rue Mouge, Paris.

Professor Justus Gaule, University of Zurich.

Professor Max v. Frey, University of Wurzburg.

TRANSPORTATION ARRANGEMENTS FOR THE BRITISH MEDICAL ASSOCIATION.

1. *Fares, Going Dates and Limits.*—(*a*) Domestic Business, Certificate Plan Arrangements; free return regardless of number in attendance. Passengers going rail, returning R. & O. Navigation Co., or *vice versa*, rate to be one and one-half fare.

(*b*) European Business.—On presentation of certificate, to be prepared and signed by the Secretary of the Eastern Canadian Passenger Association, and countersigned by the Secretary of the Canadian Committee, or the Secretary of the British Medical Association, one-way tickets to be issued at one-half lowest one-way first-class rail fare; round trip tickets at lowest one-way first-class rail fare between all points in Canada. Rates to the Pacific Coast subject to concurrence of Transcontinental Passenger Association. Steamship lines to advise Secretary what, if any, additional arbitraries are required. Dates of sale, July 1st to September 30th, 1906, inclusive. Final return date, September 30th, 1906.

2. *Extension of Time Limit.*—On deposit with Joint Agent of Standard Convention certificates issued from points in the Maritime Provinces, points west of Port Arthur and from points in the United States, on or before August 28th, 1906, and on payment of fee of $1.00 at time of deposit, an extension of time until September 30th to be granted. Joint Agency to be conducted in the name of G. H. Webster, Secretary, Eastern Canadian Passenger Association, will be kept open from August 21st to September 15th, 1906.

3. *Side Trips.*—(*a*) Side trip tickets to be sold from Toronto to delegates from the Maritime Provinces, from points west of Port Arthur and from the United States, on presentation of validated certificate, or deposit receipt, at lowest one-way first-class fare for the round trip, to all points in Canada. Dates of sale, August 23rd to September 1st, 1906, inclusive. Return limit, September 30th, 1906.

(*b*) Side trip tickets also to be sold to delegates from Ontario and Quebec to stations west of and including Sudbury, and east of and including Montreal, on presentation of validated certificate or deposit receipt, at lowest one-way first-class fare for the round trip. It being understood, also, that the arrangements authorized for the extension of time limit from points in the Maritime Provinces, from points west of Port Arthur and from points in the United States will also apply for delegates from Ontario and Quebec.

Usual additional arbitraries *via* Upper Lake Steamships to apply, viz., going lake returning same, $8.50 additional to be collected. Going lake, returning rail, or going rail returning lake, $4.25 additional to be collected. Also usual arbitraries *via* St. Lawrence route, for delegates desiring to return by steamer, on presentation of tickets to purser, viz., $6.50 Toronto to Montreal; $3.50 Kingston to Montreal.

Via Northern Navigation Company on lines where meals and berth are not included, the rail rate will apply; on lines where meals and berth are included, rate to be single fare plus meal and berth arbitrary.

Ocean Transportation.—The "Lines" will grant the minimum rates named in the circulars published by the respective lines.

NOTES.

At the meeting of the Toronto Pathological Society on Sat., April 28th, it was decided to change the night of meeting for next year to the last Wednesday of each month. The following officers were elected for the coming term: President, Dr. J. A. Amyot; Vice-President, Dr. W. H. Pepler; Treasurer, Dr. C. J. Wagner; Corresponding Secretary, Dr. E. S. Ryerson; Recording Secretary, Dr. H. S. Hutchison.

Members of the Ontario Medical Association are again reminded of the annual meeting to be held in Toronto, Monday evening, August 20th. As heretofore announced, it will this year be simply an executive session. The following are chairmen of committees for the current year: Dr. C. J. C. Hastings, Toronto, Committee on Credentials; Dr. R. J. Trimble, Queenston, Committee on Public Health; Dr. A. H. Perfect, Toronto Junction, Committee on Legislation; Dr. John Ferguson, Toronto, Committee on Publication; Dr. W. R. Walters, East Toronto, Committee on By-laws; Dr. Bruce L. Riordan, Toronto, Committee on Ethics; Dr. D. J. Gibb Wishart, Toronto, Committee on Papers and Business; Dr. H. J. Hamilton, Toronto, Committee on Arrangements.

Personals.

Dr. Garratt sailed for England at the end of May.

Dr. Greig has moved from 131 to 493 Sherbourne St.

Dr. Wm. Goldie spent three weeks of last month in the Cobalt District.

Dr. Geo. Peters expects to sail for England June 7th, and will be away about six weeks.

Drs. Palmer and Stevenson left Toronto May 23rd for England, and will be away for two months.

Dr. Geo. Porter, who has been spending some time in England and on the Continent, has returned to Toronto.

Dr. Wm. Hackney, Trin. '99, after three years' post-graduate work in London, Eng., has commenced practice in Ottawa.

Dr. S. Douglas has removed from Park River, N.D., to Winnipeg, where he will in the future practice general medicine.

Dr. G. W. Ross, Tor. '02, who has been doing post-graduate work in London for the past three years, is expected home in August.

Dr. P. W. Saunders, Tor. '02, has been appointed House Physician at the Victoria Hospital for Diseases of the Chest, London, Eng.

Dr. Walter Wright, for the past year and a half a house surgeon at the Hospital for Sick Children, Toronto, has been appointed to the interne staff at the General Hospital.

Word has been received in Toronto of the appointment of Dr. Don Armour to the position of senior assistant surgeon in the National Hospital, Queen's Square, London, England. There were a large number of applicants for the position. Dr. Armour is a son of the late Chief Justice Armour.

Dr. Joseph Graham, son of the late Dr. J. E. Graham, was married on May 2nd to Miss Eleanor Boyd, youngest daughter of Sir John Boyd. After a trip of two weeks to the cities of Chicago, St. Louis and New York, Dr. and Mrs. Graham returned to Toronto, and are living at 55 College St.

The following gentlemen have accepted invitations to attend the 57th annual meeting of the American Medical Association at Boston, June 5th to 8th, 1906, as the guests of the Association: Dr. Reeve, Dr. Peters, Dr. Primrose, Toronto; Dr. Mills, Dr. Bell, Dr. Armstrong, Dr. Shepherd, Montreal; Dr. MacLaren, St. John; Dr. Simon W. Tunstal, Vancouver.

The Canadian Practitioner and Review.

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Original Communications.

THE TREATMENT OF CIRRHOSES OF THE LIVER.*

BY PROF. R. SAUNDBY, BIRMINGHAM.

The report I am asked to prepare is to deal with the treatment of cirrhoses of the liver, that is to say, with all the forms of interstitial hepatitis. Very many of those known to pathologists are recognized only in the post-mortem room and have no special clinical symptoms, or these are overshadowed by the primary disease. This is undoubtedly true of the cirrhoses of the liver met with in chronic pulmonary tuberculosis, in heart disease, in malaria, and in infantile syphilis. In fact it is a question whether interstitial hepatit it is in itself gives rise to any symptoms which attract attention apart from the mechanical disturbance of the circulation. In Hanot's hypertrophic cirrhosis with jaundice, and in the pigmentary cirrhosis of the liver seen in cases of bronzed diabetes, there is no special indication for treatment of the liver condition. In alcoholic cirrhosis the symptoms present are frequently only those of alcoholic gastritis, and it is undoubtedly possible for a case of alcoholic cirrhosis to go through all its stages without giving rise to any symptoms calling for medical aid, until death occurs from fatal hemorrhage. The main symptom of importance which really depends upon the hepatitis is ascites, but the occurrence of this is rather an accident than a necessary consequence of the disease.

The obstruction of the portal circulation in the liver is caused by the gradual destruction of the hepatic lobules and the obliteration of the capillary plexuses lying between the radicles of the portal and hepatic veins, but at the same time a collateral circulation is developed by which the blood from the portal vein is carried onwards. This collateral circulation is formed by the dilatation of the coronary veins of the

* Read at meeting of International Medical Congress, Lisbon.

stomach and the sub-diaphragmatic veins which join to form the oesophageal plexus of veins which empties into the azygos veins. As the progress of interstitial hepatitis is necessarily slow there is no reason why these collateral vessels should not develop sufficiently to carry on the circulation and so to prevent peritoneal dropsy; in fact it is probable that but for some accident this would always occur. An alcoholic debauch leading to sudden congestion of the liver is probably the most common cause of the equilibrium being upset; an injury such as a blow on the liver, caused by a fall, may have the same effect. When dropsical fluid has been poured out into the peritoneal cavity it constitutes in itself a hindrance to the venous circulation by raising the intra-abdominal pressure, and therefore so long as it persists it prevents the re-establishment of the circulatory equilibrium. For this reason attempts to get rid of the fluid by diuretic drugs fail, while the use of hydragogue cathartics is not unattended by danger of setting up an enteritis which may prove fatal. It is therefore recognized that the best means of removing the fluid is by paracentesis. This operation is generally performed by puncturing the abdomen in the middle line, midway between the umbilicus and the pubes, the patient being seated in a chair and propped with pillows; the trocar should be connected with a tube, the lower end of which is sunk under water by a weight; a broad flannel bandage should be wound round the abdomen and drawn tighter as the cavity emties itself. Where the patient is week the abdomen may be tapped in the right flank while the patient remains in the recumbent position, but this is seldom necessary in ascites of hepatic origin. The operaton of paracentesis should be performed so soon as the fluid has accumulated in sufficient quantity to cause discomfort, and it should be repeated as often as the fluid re-accumulates. By these repeated punctures there is a fair prospect of permitting the re-establishment of the circulation and of effecting thereby a cure of the abdominal dropsy. This object is one worthy of attainment because when relieved the patients feel themselves restored to health and are able to resume their ordinary duties without being conscious of any disease. A hospital patient of mine, who was tapped five times during 1901, wrote to me in August, 1904, to say that at the time of writing he had never felt better in his life; he is a gentleman's servant, and had been able, with the assistance of the footman, during the whole of the previous winter to carry his master, who weighed sixteen stone, up and down stairs every night and morning.

Where repeated tapping is not successful in preventing the return of the dropsy the Talma-Morison operation may be performed. This consists in opening the abdomen and stitching the omentum to the abdominal wall so as to increase the area of the collateral circulation. In Morison's operations he has subsequently drained the abdomen for many weeks, keeping a tube in position so long as there was fluid to run away, but in one of his cases after the wound had healed the ascites re-accumulated and had to be drawn off by tapping. This prolonged drainage does not seem to be justifiable. The essential part of the operation is the creation of additional adhesions between the viscera and the wall of the abdomen, and time is required to permit of the development of the new vessels to such a size as to be of real service; but it is not necessary to drain continuously in order to effect this. So long as the tube is kept in the patient must be confined more or less to bed, whereas if the wound is allowed to close he should be able to get about in five or six weeks' time, and would only, at the most, have to go to bed again for a few days at such times as it might be necessary to remove any accumulated fluid by further punctures. This is the procedure adopted by Prof. Terrier, and seems to be that which deserves approval.

The value of this operation should not be overestimated. As a rule repeated simple punctures suffice. It may be admitted that Morison has proved that his operation adds considerably to the collaterial circulation, and therefore where repeated punctures have failed the operation should be tried. It is not fair to postpone it till the patient is moribund or suffering from the terminal infection to which these cases so often succumb. If tapping is employed sufficently early and repeated as often as necessary, the stage at which the operation will become indicated will not be too late.

The other symptom which is a direct result of the hepatitis is hematemesis caused by the rupture of a dilated vein formed in the course of the development of the collateral circulation. These veins usually rupture in the esophagus.

The symptoms of ascites and hematemesis are more or less mutually exclusive, and rarely occur in the same individual except, perhaps, just before death.

The condition is one which does not admit of any radical treatment; rest, abstinence from food, and an ice-bag, with a hypodermic injection of morphia constitute the extent of our therapeutic resources.

A PLEA FOR THE INTERNATIONAL STUDY OF CARCINOMA.*

By NICHOLAS SENN, M.D., Chicago, Ill.
Professor of Surgery in the University of Chicago.

"Sed opertet privatis utilitatibus publicas, mortalibus æternas anteferre; multoque diligentius muneri suo consulere, quam facultatibus."

Introductory Remarks.

Humanitarian Service.—From time immemorial the medical profession has been in search of ways and means to reduce the sum of human suffering in its efforts to prevent and treat disease.

The physicians of all times, more than any other class of men, have devoted a large part of their time, talents and energies to promote the happiness, welfare and usefulness of their fellow-beings without any expectation of a pecuniary gain for their unselfish, self-imposed and often arduous task.

The philanthropic spirit has always animated medical men and their organizations, large and small. A liberal part of the transactions of the medical societies throughout the entire civilized world is devoted to subjects which have a bearing on the prophylaxis of disease. The public will never realize the vast amount of work that has been done in this direction by the mass of the profession, inspired by men of the highest scientific attainments. The growing knowledge of the real cause and nature of disease, the outgrowth of original research and accurate scientific investigation by a host of earnest students the world over has already resulted in erasing from our nomenclature a number of formidable diseases and in limiting the spread of deadly epidemics.

Preventive Medicine.—The crowning glory of our profession in the future will be preventive medicine. The sphere of the general practitioner will become more and more circumscribed; that of the scientist will expand and keep step with the progress and advancements of preventive medicine. Rational preventive medicine had its origin contemporaneously with the foundation of the new science of bacteriology, and its further development and sphere of usefulness must necessarily depend on the progress and expansion of the latter. We may confidently look to the near future for more men like

*Delivered before one of the general sessions of the Lisbon International Medical Congress, April 19th to 26th, 1906.

Jenner, Haffkine, Lister, Pasteur and Koch, who will do their good share in blotting out preventable diseases.

Surgery has not been idle and has contributed its liberal part toward reducing the death-rate and diminishing human suffering. Based on the teachings of Pasteur and Lister, a system of aseptic and antiseptic precautions has been gradually perfected, which is now in force wherever modern surgery is practised, and which has been the means of almost entirely eliminating from wound complications the disastrous affections due to infection, and has greatly increased the range of operative procedures. Primary healing of wounds is now the rule, instead of the exception, as was the case only a quarter of a century ago. Hospital gangrene, the bla k monster of military and civil hospitals less than half a century ago, has disappeared from the face of the earth never to return. Erysipelas and pyemia have become pathologic curiosities. Secondary hemorrhage, such a frequent and dangerous occurence formerly, seldom now disturbs the peace of mind of the operating surgeon since he has come in possession of the aseptic absorbable ligature.

Carcinoma a Mystery.

There is one dark chapter in surgery to which I wish to call your attention on this occasion, and in which I desire to enlist the interest of the medical profession throughout the entire world—it is carcinoma. It is an old, old subject, which has interested the profession for centuries and, which, notwithstanding the prodigious efforts which have been made to solve the mystery of its real cause and nature, remains unexplained. Carcinoma is so common, and, according to recent statistics, unquestionably on the increase that it behooves our profession to make use of every possible means and avenue to discover its real cause and nature, and, having accomplished this, to open up the way for its prevention and more successful treatment.

The prevalence of this disease, its relentless course and obstinacy to all known methods of treatment surround it with the gloom of fear and hopelessness to the public. By hearsay and observation the masses of the people are firmly impressed with the idea that carcinoma is a fatal disease, and when such a diagnosis is made it is regarded as a death sentence. The medical profession is equally aware of the painful fact that in the great majority of patients afflicted with this disease it

proves fatal within three to five years, and that the only cases which recover permanently are those in which an early radical operation is performed.

A Local Disease.

One feature of this dreadful disease has been definitely settled, and that is that it begins as a local affection, and it is in this stage that it is amenable to successful treatment by an early radical operation, and it is safe to state that not more than 25 per cent. of all the patients who apply for surgical aid are within reach of successful operative intervention. Left to itself, the intrinsic tendency of the disease is to destroy life. Its malignant course is not influenced by any kind of internal medication or local treatment short of complete destruction or removal of every vestige of carcinoma tissue. The prevention and successful treatment of any disease depend on the neutralization or removal of its cause. Material progress in the treatment of carcinoma can only be hoped for after we have succeeded in demonstrating its essential cause.

Non-Parasitic.

The most intense interest in the study of carcinoma was awakened with the origin and rapid growth of the modern science of bacteriology. As soon as it became known that all inflammatory processes are caused by specific pathogenic microorganisms it was very natural that, by reasoning from analogy, the conclusion was reached that carcinoma must be a parasitic disease. There are so many similarities between chronic infective diseases, notably tuberculosis and carcinoma, that we can readily appreciate the motives that led to the investigations in all parts of the civilized world concerning the microbic origin of carcinoma. Various methods of tissue staining, cultivation and inoculation experiments have all been utilized by thousands of earnest investigators in their strenuous effort to discover and prove the essential microbic cause of carcinoma. A number of intracellular and extracellular bodies have been found and described as the specific parasitic cause of carcinoma, but for none of them has the claim been substantiated by crucial impartial laboratory and clinical tests. Searching criticisms from different reliable sources have disarmed all such claims.

From an etiologic standpoint, very little has been added to our knowledge of the nature of carcinoma since the epoch-making researches of Virchow, Cohnheim, Thiersch and

Waldeyer. The pathology of carcinoma has been materially advanced by the most pains-taking and accurate microscopic work concerning the origin, growth, multiplication and life history of the carcinoma cell and its manner of local and general dissemination. The atypical, irregular mitotic figures which are seen in the segmenting carcinoma cell are in strong contrast with the regular, symmetric, karyokinetic processes observed in direct division in normal tissue cells. The metastatic processes have been traced, step by step, through the lymphatic channels and the systemic circulation, and it has been demonstrated beyond all doubt that the secondary tumors are the direct offspring of migrating carcinoma cells from the primary tumor, and that the pre-existing mature tissues take no active part in the tumor formation, primary or metastatic.

This tends to prove that the histology and histogenesis of carcinoma speak against the parasitic origin of this disease and in favor of a disease of the epithelial cells independent of infection. The mass of tumor tissue, the parenchyma of carcinoma, is invariably made up of epithelial cells in the primary, as well as in all metastatic tumors, regardless of their anatomic location. Inflammatory products, on the other hand present the same histologic structure independent of their anatomic location or character of the tissue involved. Infective processes are caused by the pathogenic action of micro-organisms on pre-existing tissue, and the inflammatory swelling is made up of the products of effusion and cell migration through the damaged capillary walls plus new tissue cells generated by the pre-existing tissues acted on by the microbic cause of the inflammation.

Carcinoma is a tumor that invarably starts from a matrix of embryonic epithelial cells of prenatal or postnatal origin, and in its growth only epithelial cells take an active part; hence, if its microbic nature should ever be demonstrated, it will be a microbe which has a special predilection for epithelial cells, a very unlikely, exceptional phase in the vast field of bacteriology. The failure to discover the microbic origin of carcinoma, together with the histology and histogenesis of the tumor, speaks strongly against the parasitic origin of the disease. Inoculation experiments have so far only proved the negative side of the question. As an additional proof of the truth of this statement I will mention an experiment which has confirmed me in the belief of the non-parasitic nature of carcinoma.

Author's Experiment.—On May 4, 1901, I inoculated myself with carcinoma tissue immediately after I had completed a radical operation for advanced carcinoma of the lower lip. The patient from whom the malignant graft was obtained was an Irishman, 60 years of age. The submental and submaxillary lymphatic glands were involved. The excised glands were immersed in a warm saline solution, and from one of them a fragment, the size of a split pea, was used for implantation. A small incision was made about the middle of the forearm, over the supinator muscles, under strict aseptic precautions. One of the margins of the skin wound was undermined sufficiently to make a pocket large enough to receive the graft. After implantation of the carcinoma graft the wound was closed with a horsehair suture and iodoform collodium. The carcinomatous nature of the glandular affection was proved by microscopic examination of the gland from which the tissue was taken. In the course of a week a subcutaneous nodule, the size of a pea, made its appearance, which remained stationary for two weeks, when it gradually disappeared. At the present time a faint linear scar remains, indicating the site of the incision. This, as well as a few similar experiments made by Alibert, furnish strong, if not convincing, proof of the non-parasitic nature of carcinoma. The bacteriologic search for the supposed microbic cause of carcinoma will continue in the future, but undoubtedly will be as devoid of positive results as it has been in the past.

International Co-operation Invited.

It seems to me that the time has come when it is necessary, by joint and persistent action, to study the etiology of carcinoma from other standpoints, and it is for this reason that I have chosen as the subject for my oration "A Plea for the International Study of Carcinoma." The vast importance of this subject merits united systematic efforts, in which representatives of all nations should take a willing active part. It is only by such concerted action that we may expect to reach the final solution concerning the true nature of this strange disease, and in doing so prepare the way for a rational and more successful treatment.

So far as our present knowledge goes, carcinoma must be regarded as a tumor caused by an atypical proliferation of epithelial cells from a matrix of embryonic cells of congenital or postnatal origin. The epithelial proliferation takes place in vascular tissue where epithelial cells are never found in a

normal condition. The heterotopic location of these cells distinguishes carcinoma from all benign epithelial tumors. Atypical proliferation of epithelial cells signifies their growth and multiplication in a locality where they have no legitimate citizenship.

The malignancy of carcinoma is due to the fact that the epithelial cells remain in their embryonic state, fail to reach maturity, retain their abnormal vegetative capacity until degeneration sets in, and by virtue of their ameboid movements invade the neighboring tissues, enter the lymphatic channels and finally give rise to regional and general metastasis. It is this abnormal behavior of the epithelial cells, their prodigious vegetative capacity and their migration into all adjacent tissues, irrespective of their histologic structure, that characterizes their life history and intrinsic pathologic tendencies. What are the general influences or local conditions productive of such a morbid erratic cellular life? The disease in its incipiency being local, it would be natural to search for local causes. If this be the case, where do the first textural changes take place? Are they to be found in the epithelial cells or in the tissues in their immediate environment? These are questions that must be answered before the etiology of carcinoma is definitely settled.

Factors in the Etiology of Carcinoma.

That the general condition of the organism, an aptitude, has some influence in determining the disease there can be no question, but that it is entirely responsible for it is more than doubtful. If a general predisposition were the principal agent in causing the disease, autoinoculation experiments ought to have proved successful. In the case of an inoperable carcinoma of the leg, a few years ago, I implanted subcutaneously fragments of carcinoma tissue from the same patient at two points on the affected limb. A little nodule formed at the seat of inoculation, remained stationary for about two weeks, and then disappeared entirely. The same experiment has been made by several other surgeons, with a similar negative result. The microscope has proved an invaluable aid in the study of the histology and histogenesis of carcinoma, but so far it has been powerless in demonstrating its cause. Future microscopic researches may yield unexpected results, but it appears to me that the time is at hand to extend our inquiries regarding the etiology of carcinoma beyond the

confines of laboratories and explore other fields less cultivated in search for its cause or causes. United action on a large scale, embracing enthusiastic investigators of all nations, concerning the influence of heredity, age, race, climate, diet, habits, trauma, prolonged irritation, chronic inflammation, scar tissue and benign tumors in the causation of the disease, could not fail in bringing more light on this perplexing subject.

Heredity. The influence of heredity in the etilogy of carcinoma is unquestionable. Every surgeon of large experience has observed cases in which the disease could be traced through several successive generations. The percentage of cases in which carcinoma has been shown to be hereditary is estimated at from 12 to 33 per cent. by different authors. More extensive and accurate statistics from all available sources are needed to prove the influence of heredity in the etiology of carcinoma. In studying the influence of heredity, it is not fair to exclude from the statistics distant cancerous relatives, as has been done by Cripps and others, because it is well known that congenital deformities, physiognomy and mental peculiarities frequently reappear several generations apart and in distant relatives. There is no reason to doubt that at least a predisposition or apitude for carcinoma is transmitted in a similar manner.

Age.—It is a familiar fact that advanced age plays an important role in the etiology of carcinoma. Of the 9,906 cases collected by De la Camp, there was only 19 less than 20 years of age. I have seen a carcinoma of the mammary gland in a girl, 21 years of age; a carcinoma of the rectum in a boy of 17, and several cases of carcinoma of the stomach in persons between 25 and 30 years of age. There appear to be conditions, local or general, antagonistic to carcinoma during the most active physiologic processes concerned in the growth and development of the body, and the disease manifests a special predilection for the aged when all the active processes in tissue formation are on the decline. Age has also a decided influence on the clinical course of carcinoma, as it is well known that its malignancy diminishes with advancing age. The senile state favors the development of the disease, but exercises an inhibitory influence in its progress, while, on the other hand, the juvenile tissues are antagonistic to it, but when it does occur to young subjects it pursues an unusually malignant course. The influence of age on the prevalence and malignancy of carcinoma merits more careful study in

searching for the key that will eventually unlock the mystery of its etiology.

Racial and Social Influences. It is a well-known fact, confirmed by reliable and extensive statistics, that some races are much more predisposed to carcinoma than others. The black and yellow races are not as susceptible to the disease as the whites. Our North American Indians have been and still are peculiarly exempt from this disease. As a rule, to which there are few exceptions, it may be stated, without fear of contradiction, that the primitive races, as long as they remain true to their original habits, customs and manners of living, seldom suffer from carcinoma; on the other hand, the disease is most prevalent where civilization has reached its climax. This difference in the prevalence of carcinoma among the ignorant and educated, the savage and the highly civilized, is undoubtedly due, to a large extent, to diet, brain rest on one side and a strenuous life, worry and discontent on the other. That the state of the nervous system plays a part in the etiology of carcinoma I am satisfied and have seen it repeatedly demonstrated in my practice. Future statistics based on racial and social influences will bring out many important facts that may forge the connecting link in the long chain of evidence necessary to reach the final aim of etiology research.

Climate and Topography.—The very unequal geographic distribution of carcinoma over the surface of the earth points to local conditions, climatic, racial and dietetic, which favor or inhibit the development of the disease. Like lepra, carcinoma has its favorite geographic haunts. A careful study of the local condtions where carcinoma is most prevalent should form an important part of future researches relating to the etiology of this disease, and, if done on a large scale by the most competent men in such localities, may lead to important results.

Legrain makes the statement that carcinoma is unknown in Algeria, except as it appears in the European. Behla has made a study of the geographic influences in the causation of carcinoma. According to his observations it is very rare in the extreme northern and southern countries. It occurs with greatest frequency in the temperate zones of Europe, Asia and America. It is very rare in Central Africa, the South Sea Islands, Central America, and almost unknown in New Guinea. Haviland, in his researches, found the disease in the same latitude most prevalent along river courses and in localities subjected to periodic floods, while it is less frequent in high latitudes and in the spring districts at the river

sources. It was a noteworthy fact that geologically the alluvial soil appeared to constitute a local cause, while the chalky or lime soil exercised the opposite effect. Heimann made similar inquires and came to the same conclusons.

Diet.—For a long time popular belief has accused certain articles of food, such as meats, tomatoes, condiments, as causes of carcinoma. Verneuil and Reclus long ago called attention to the fact that herbivora were much less liable to carcinoma than the carnivora, and they ascribed the great increase in the number of patients suffering from carcinoma that came under their observation during forty years to the increased consumption of meat by the laboring classes. That diet may have some influence as a predisposing influence there can be no doubt, but to assume that it is the sole or even the principal cause of carcinoma would be a position which is not sustained by facts.

During my trip last summer to the very heart of the Arctics to within 650 miles of the North Pole, I made special observations and inquiries in reference to the occurrence of tumors among the aborigines. These people have lived for unknown centuries on an exclusive animal diet, blubber and meat; they do not know the taste of a single article of vegetable diet; they are the filthiest people in the world, as they never wash themselves, and wear fur throughout the entire year, and yet they appear to be immune to tumor formation of any kind. The idea occurred to me that this immunity might be due to the iodin contained in the food obtained from the sea animals.

The North American Indians, who in their primitive state lived largely on an animal diet, were likewise singularly free from tumor formation, more especially carcinoma. The subject of diet as a causative element of carcinoma deserves further and more thorough and systematic investigation.

Habits.—Certain habits appear to be conducive to the occurrence of carcinoma. Habits and occupations which expose certain parts to repeated and prolonged irritation deserve special mention here. I will refer to two only as most striking illustrations, smoking and betel chewing. Justly or unjustly, smoking has been accused for a long time as being a frequent cause of carcinoma of the lower lip, tongue and tonsils. The clay pipe has an unenviable reputation in this respect in cases of carcinoma of the lower lip, and probably deservedly so. It is singular, however, that in many countries where cigarette smoking is practiced to the greatest excess, like Turkey, Palestine, Algeria and Morocco, carcinoma of the lip and mouth

is of rare occurrence. The vice of betel chewing, so generally practiced in Ceylon and all through India, is unquestionably responsible for the frequency with which carcinoma of the mucous lining of the mouth is met with in those countries. The principal constituents of "betel" are the betel leaf, areca nut, caustic lime and some sort of a strong condiment, all powerful irritants of the mucous membrane. The disease affects the buccal surface of the cheek, generally commencing opposite the teeth of the lower jaw and spreading with varying rapidity according to the pathologic type of the tumor.

Trauma.—The influence of traumatism in the etiology of carcinoma is variously estimated by different authors. Trauma exercises a more important role in the causation of sarcoma than carcinoma. In most cases in which an alleged single trauma has been charged with having caused the disease, the carcinoma was present when the injury was received, the injury having called the patient's or physician's attention to it. Carcinoma seldom, if ever, follows a single injury, but develops more frequently in consequence of prolonged irritation.

Prolonged Irritation.—Frequently repeated and long-continued irritation is usually recognized as an exciting, if not the principal, cause of carcinoma. Certain occupations, habits, malposition and diseases of teeth and displacement of organs due to abnormal sources of irritation must be included under this category as agents which so often precede carcinoma and which must be regarded at least in the light of determining causes, as without such local harmful action the disease might not have made its appearance. The local irritation effects tissue changes conducive to carcinoma formation in persons who are subjects of a hereditary or acquired predisposition or aptitude to the disease. It would be well to study more thoroughly and on a larger scale, experimentally and clinically, the effect of chronic irritation on the etiology of carcinoma.

Chronic Inflammation.—While the histologic processes observed in inflammation have nothing in common with carcinoma clinical observatons appear to prove that carcinoma not infrequently develops in an organ or part which is the seat of a chronic inflammation. It is not at all uncommon to find a carcinoma take its starting point in ulcers of the stomach, and chronic ulcers of the lower extremities, in tubercular lesions of the skin, and in chronic inflammatory affections of the mucous membrane of the tongue and other organs. Goodhart

has called special attention to ichthyosis of the tongue as a cause of carcinoma. It has been well known for a long time that this superficial inflammation of the tongue frequently precedes carcinoma.

Another inflammatory product, very often the starting point of carcinoma, is the wart. Warts on the forehead, cheeks and hands of aged persons, "verruca senilis," most frequently undergo such malignant transition. The inflammatory process is undoubtedly concerned in laying the histologic foundation for carcinoma by causing the penetration of embryonic epithelial cells into the inflammatory product, where they are brought into contact with vascular tissue, which increases their vegetative activity and alters their habits of life.

The influence of chronic inflammatory processes involving the epithelial cells of glandular organs and the surface of the skin and mucous membranes as one of the causes of carcinoma should receive more careful attention than has been devoted to it. Extensive and reliable statistics on this phase of the etiology of carcinoma is what is needed in the further elucidation of this subject.

Scar Tissue.—The origin of carcinoma in scar tissue has been so often observed that German surgeons designate it as "Narbenkrebs." The tumor almost invariably begins as a subepidermal nodule from a matrix of embryonic epithelial cells buried in the mesoblastic tissues during the process of healing by granulation of the injury or lesion which gave rise to the tissue defect.

Trauma, irritation, inflammation and cicatrization as causes of carcinoma undoubtedly play a double role in lighting up the disease in persons predisposed to it, as any of them may be the means of transporting the essential tumor elements, epithelial cells, from their normal vascular physiologic habitat into a vascular district and may likewise be concerned in stimulating their vegetative life by diminishing the normal physiologic resistance of the adjacent tissues.

Benign Tumors.—The frequency with which benign epithelial tumors undergo transformation into carcinoma remains a matter of individual opinion and isolated experience. In papilloma and adenoma the epithelial cells which make up the parenchyma of the tumors are not in touch with the blood vessels. Any and all influences, local and general, which are capable of stimulating cell growth beyond the limits observed in benign tumors and which result in penetration of the membrana propria by embryonic epithelial cells, are the causes on

which depends the transition of a benign epithelial tumor into a carcinoma.

Among the local causes which bring about such a malignant transformation may be enumerated trauma, prolonged or repeated irritation, and incomplete removal of the benign tumor by excision or the employment of caustics. Benign tumors on exposed surfaces of the body are most prone to become malignant, because they are most subjected to injuries and irritations which result in histologic changes favorable to the development and growth of carcinoma. From a scientific as well as a practical point of view, it is extremely important that by concerted action more light should be shed on the frequency with which benign epithelial tumors become the starting point of carcinoma and the influences which determine such transition.

THE TREATMENT OF APPENDICITIS AND ALLIED BOWEL TROUBLES BY HIGH-UP INJECTION.

By P. PALMER BURROWS, M.D., C.M., Lindsay, Ont.

Ex-President of the Association of Health Officers, Member of the American Public Health Association, and Member of the Dominion Medical Association,

To the President and Members of the Fifteenth International Congress:

Gentlemen,—At a meeting of the Medical Association held in Toronto on June 6th, 1895, I read a paper showing that the ordinary indiarubber syringe presents several faults of construction. Its vaginal attachment is of such small size that it does not smooth out the mucous folds, and therefore the wash-water or medicine does not reach the irritated or ulcerated surface; the ear-nozzle ought also to be of soft indiarubber as less likely to injure delicate structures. My principal object, however, on the present occasion is to point out that the hard, short nozzle used for the administration of enemata per rectum is in several respects objectionable. Being short, it does not reach far enough to deliver its charge where it would do most good, and, being hard, it impinges on the sphincter muscle and this stimulates to impulsive action; the injection being delivered low down is speedily voided; and little opportunity, therefore, is given for solvent action on the contents of the bowel. I then proposed the using of an elastic indiarubber tube from fifty to sixty inches long and similar in calibre and character to the tube used in washing out the stomach. With such an apparatus, solvents, antiseptics, or purgatives could be introduced at a point to serve the purposes intended. At this time I gave it as my experience that the soft indiarubber tube is not only a valuable agent in the relief of obstinate constipation, impaction of feces, invagination, and muco-enteritis, but it is also of pre-eminent utility in the treatment of appendicitis.

Since writing that paper more than ten years ago I have had abundant opportunity of further observation, and although I have had some very serious cases under treatment I have yet to meet one in which surgical interference was necessary, nor have I one death to record. The emptying of the bowel and the removal of irritating matter are not the only effects of high-up injection, for when the bowel is distended the

* Paper presented at Lisbon, April 24th, 1906.

appendix is retracted and distended, and in this way the fluid injected has a chance to enter and remove sources of irritation when immediately within the appendix, and is more largely curative. I do not hold that this or any other medical or expectant treatment will in all cases supersede the knife; for instance, when the temperature of the patient has increased with a subsequent sudden lowering, and the formation of pus is suspected, I certainly would not rely on medical treatment alone. It is, however, well to remember (1) that Dr. O. Hanolan has stated from personal observation that in 42 necropsies in which a previous diagnosis of appendicitis had been made 32 of the deceased were found to have normal appendices; and (2) that Dr. Horrick has related that in the French army 188 cases were operated upon with 23 deaths, and 480 were treated medicinally with 5 deaths. Surgeons of experience maintain that it is best to operate early, but in my opinion there is little danger in delay if the patient is given easily-digested, non-fermentable food, rest in bed, antiphlogistine (a combination of clay, glycerine, boric acid, menthol, and eucalyptus) over the bowels, or a cold compress. The measures which I take to mark the ne plus ultra in the treatment of appendicitis are as follows: The filling (or rather the complete dilating) of the bowel by means of the long tube with sweet oil, glycerine and water, or soap and water; hypodermic injections of morphine or morphine and atropine; and complete abstinence from food, or the taking of it sparingly in order to secure digestive rest. The following case supplies a good example of the extent to which by the long tube an injection may be forced. The patient, who was a man about 40 years of age, weighing about 275 pounds, and of immense girth, had partaken heartily of pork and beans. He was normally a large eater, consuming four or five pounds of steak, with potatoes, toast, and so forth, at a sitting. When I saw him he was suffering from severe pain in the bowels, which were constipated and much distended with gas and food. The medical men who treated him in a village some distance from Lindsay had used the low-down injection repeatedly and had given him purgatives without effect. I at once used a tube fully six feet long, and after one or two very scanty evacuations succeeded in passing the tube for its entire length and pumped in a gallon or two of warm water, the abdomen being kneaded at the same time. A quantity of broken-up, partly digested beans came away. There was considerable vomiting, after which the injection entered more

readily. When a very large quantity of fluid had been injected the patient complained of great discomfort. The vomiting became more continuous and smelt of peppermint, which had been added to the injection as an anti-flatulent. The vomiting, with the continued pressure of the injection, had evidently reversed the peristaltic action, and there was no doubt that the water flavored with peppermint had passed completely through the alimentary tract and was being ejected by the stomach through the mouth. The distension and soreness were relieved, and the patient made a quick recovery. Another case, which was almost a complete replica of the foregoing one, was published by Dr. E. E. Tope in the *Medical World* of August, 1904. He does not give the length of the tube employed, but writes: "A large rectal tube was passed the full length into the bowel. . . . We kept on pumping water into the patient and calling for more water, while the patient kept vomiting it up, until we had used more than five gallons, and the water was no longer discolored." I need not enter into a controversy as to the possibility of passing the ileocecal valve, for in these cases there is no doubt that the long tube placed the injection beyond that point and so far up that peristalsis was reversed and the stomach accepted the inevitable. This is, perhaps, not, after all, so very strange, as in incarcerated bowel and even in appendicitis stercoraceous vomiting occurs, and as soon as it is admitted that the ileocecal valve may be passed the rest would appear easy.

In the above letter to *The London Lancet* I have endeavored to make plain three special points:

First, the urgent call for and efficient action of high-up injections of a nutritive antiseptic or solvent character. To this I would add the testimony of Dr. R. D. Mason: "There is no doubt but that patients often come to a hospital with serious abdominal affections and desire an operation. It is a rule that these patients are constipated and the bowel filled with excrement and ptomaines that should be cleared out. I have repeatedly had cases where the patient had taken cathartics until the stools were composed of nothing but watery secretions of the bowels, and yet several days later hard, solid motions were passed. There seems to be an accumulation in the cecum that is with difficulty dislodged."

Second, that an elastic tube can be passed up into the bowel to a greater length than has been formerly thought possible. In a paper by Dr. Sloan, which appeared in the *Medical Review,* he gives the accepted idea: "A rubber tube three

feet long and three-eighths of an inch in diameter should be passed as high as possible and the rectum and lower colon emptied by enema. If they are already empty it will pass through the sigmoid flexure to the junction of the transverse and descending colon; the tube should pass twenty-six to thirty-two inches; the latter brings it fairly within the outlet of the transverse colon."

Third, by filling the bowel we mechanically dilate, and in dilating shorten the appendix, just as inflating a bladder or toy balloon with a teat attached. It will shorten and the opening dilate so that the fluid can enter and more thoroughly wash out.

I have thought this subject of sufficient interest to be brought before the medical profession.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

Results of the Primary, Intermediate and Final Examinations.

The results of the May examinations of the College of Physicians and Surgeons of Ontario are announced in the primary, intermediate and final classes. They are arranged in alphabetical order as follows:

Primary Examinations.

C. E. Anderson, Oil Springs; W. A. Atkinson, Barrie; A. R. Alguire, Cornwall; J. B. Auston, Brighton.

C. W. Becker, Legrange, Ill.; J. C. Brown, Paisley; J. G. Bricker, Gorrie; H. K. Bates, Toronto; J. C. Byers,, Eganville; W. Biggs, Hallville; E. Boyd, Toronto; P. G. Brown, Toronto; A. M. Bell, Moscow; T. W. Blanchard, Appleby; R. P. Burwell, Shedden.

D. W. Clarke, Ballyduff; H. Crasweller, Sarnia; D. F. Carswell, Elora; S. V. Carmichael, Spencerville; J. D. Campbell, Arnprior; W. G. Coulter, Windsor; N. A. Connelly, Kingston; A. L. Campbell, Belwood; O. W. Craise, Petrolean; W. F. Cornett, Kingston; G. L. Cockburn, Sturgeon Falls; M. J. Casserly, Tottenham; L. L. Cairns, Huntsville.

D. W. Davis, Brockville; R. O. Davison, Brantford; D. G. Dingwell, Lancaster.

C. Elmore, Springvale; H. L. Emmett, Font Hill; A. W. Ellis, Toronto; D. L. Ewin, St. Thomas.

H. W. Feldham, Copper Cliff; W. D. Ferguson, Valletta; F. J. Folinsbee, Strathroy; F. J. Fox, Lucan; J. M. Fowler, Petrolea.

W. M. Gilmour, Brockville; C. W. Graham, Goderich; W. Glanfield, Jarvis; L. A. B. Grier, Dundalk; D. G. Galbraith, Iona Station.

J. P. Harrison, Dunnville; H. T. Hamill, Meaford; C. E. Hill, Toronto; R. J. Hamilton, Brinsley; F. C. Harrison, Toronto; W. A. Harvie, Orillia; W. G. Hutchison, Walsingham Centre; B. B. Horton, Bridgewater; A. K. Haywood, Toronto; J. G. Harkness, Irena.

D. Jamieson, Glen Arm; L. Jamieson, Birmingham, Mich.

W. Krupp, New Dundee; B. C. Kelly, Bridgenorth; J. T. Keyes, Oakwood; A. L. Kinsey, Bracebridge.

A. S. Large, Poole; H. B. Longmore, Camden East; C. Laidlaw, Georgetown; Rosamond Leacock, Orillia; J. H. Lawson, Brampton.

H. H. Moore, Weston; S. E. Moore, Oliphant; W. Mabee, Toronto; G. R. Mackenzie, St. Thomas; A. H. Miller, Castleton; P. S. MacFarlane, Toronto; H. L. Minthorn, Queenston; W. Morrison, Ashgrove; A. S. MacPherson, London; F. W. Mohr, Ottawa; A. M. Murray, Newton; H. S. Muckleston, Perth.

T. T. McRae, Cranbrook; W. D. McIllmoyle, Fraserville; L. G. McCabe, Waterdown; W. G. McCulloch, Enfield; A. McDonald, Scotch Line; Sarah McLean, Dresden; A. D. McKelvey, Brussels; D. McLellan, Foresters' Falls; W. J. McCormick, Toronto; F. B. McIntosh, McDonald's Corners; W. B. McNaughton, St. Raphael.

F. L. Neely, Dorchester Station.

F. J. O'Connor, Long Point.

O. S. Pogue, Lindsay; W. Pratt, Cobourg; R. K. Paterson, Renfrew.

G. Rogers, Kingsville; W. E. Robertson, Monkton; R. S. Richardson, Toronto; J. A. Routledge, Dunkeld; W. H. Robertson, Toronto; G. E. Richards, Newboro'; A. Ross, London; A. G. Rice, Toronto Junction; Edith Russell, Windsor; C. E. Rowland, Toronto; A. C. Ricker, Dunnville; W. C. Ross, Peterboro'; J. J. Robb, Battersea.

C. W. Sawers, Brucefield; J. B. Simpson, Maynard; W. R. Scott, St. Thomas; N. E. Sproule, Schomberg; J. M. Smith, Cannington; F. R. Sargent, Kingston; J. R. Stewart, Waba; E. Sutherland, Montreal.

W. E. Tisdale, Woodstock; E. J. Trow, Stratford; R. A. Thomas, Toronto; R. M. Turner, Thorold.

C. B. Ward, Amiens; F. D. Wilson, Toronto; G. W. Williams, Aurora; E. C. Wilford, Blyth; A. I. Willinsky, Toronto; R. E. A. Weston, Tillsonburg; F. W. Wallace, Saintfield; J. L. Wilson, Toronto; R. R. Walker, Waterdown.

C. A. Young, Ottawa.

Intermediate Examinations.

W. A. Atkinson, Barrie; A. R. Alguire, Cornwall; J. B. Auston, Brighton.

F. B. Bowman, Dundas; R. P. Burwell, Shedden; A. M. Bell, Moscow; B. A. Blackwell, Clandeboye; N. H. Beal, London; W. Bapty, London; W. E. Brown, Millbank; P. C.

Bonghart, London; E. Batton, Phillipsville; J. K. Blair, Tarbert; D. C. Balfour, Hamilton; G. Boyd, Gravenhurst; Alice Baxter, Toronto.

A. A. Campbell, Shanty Bay; C. R. Cumming, Galt; J. W. Counter, Toronto; J. C. Colhoun, Toronto; J. W. Crookshank, Blenheim; R. O. Coghlan, Wyoming; R. Colville, Vasey; J. Chant, Chantry; H. B. Coleman, Cookstown; D. G. Cameron, Wallacetown; Blanch Campbell, Ridgetown.

D. G. Dingwall, Lancaster; E. G. Davis, London; R. T. Dillane, Tottenham; J. Duncan, Toronto; E. C. Dickson, Orillia; F. B. Dawson, Maple Creek.

D. L. Ewin, St. Thomas.

E. George, Port Elgin; O. Glenn, Adelaide; A. J. Gilchrist, Toronto.

L. S. Holmes, London; J. E. C. Henderson, Hamilton; A. Henderson, Palmerston; N. J. Heatlie, Salina; D. E. Howse, Port Elgin; C. S. Hawkins, Canton; J. H. Holbrook, Toronto; G. W. Houston, Tweed; H. H. Huehnergard, Berlin.

E. J. Jessop, Fergus; R. A. Jones, Mount Forest.

C. G. Kirkpatrick, Oro; D. M. Kilgour, Guelph.

C. A. Lawlor, Kingston; W. A. Lewis, Barrie; L. C. Lauchland, Oshawa.

Cora Murdoch, Sarnia; F. W. Manning, Windsor; R. J. MacMillan, Dutton; R. J. Manion, Fort William; B. D. Munro, Toronto; F. J. Munn, Toronto; N. A. Munro, St. Thomas; R. W. Mann, Bridgenorth; L. Main, Sheffield; F. W. Mohr, Ottawa; H. S. Mucklestone, Perth; S. J. N. Magwood, Toronto; J. C. Masson, Toronto; A. S. Moorehead, Toronto.

T. T. McRae, Cranbrook; D. McLellan, Foresters' Falls; W. J. McCormick, Toronto; T. McQuaid, St. Columbus; A. D. McConnell, Chesley; S. McCollum, Beaver Mills; W. B. McNaughton, St. Raphael; D. McKenzie, Morden; A. D. McMillan, Finch.

F. J. O'Connor, Long Point.

W. R. Patterson, Kingston; R. K. Paterson, Renfrew; L. L. Playfair, Kingston; A. Pain, Hamilton.

Olive Rea, Toronto; W. H. Reid, Lucknow; W. T. Rich, Oakwood; J. J. Robb, Battersea; F. J. Reid, Orillia; J. Reid, Renfrew; A. H. Rolph, Toronto; F. X. Robert, Chatham.

R. N. Shaw, Niagara Falls; E. Sutherland, Kingston; J. R. Stewart, Waba; H. A. Stewart, St. Thomas; W. E. Spankie, Wolfe Island; C. W. Slemon, Hayden; W. B. Sproule, Thornton; J. Spence, Webbwood; J. Spiers, Drumbo; R. R. Smale, Bowmanville.

R. A. Thomas, Toronto; A. Thibadeau, Chatham; F. B. Thornton, Consecon; C. A. M. Thrush, Byng; Rachael Todd, Toronto.

F. R. Warren, Moose Jaw; J. L. Wilson, Toronto; R. E. Wodehouse, Blenheim; J. J. Wade, Balderson; F. Woodhall, Hamilton; J. W. Wigham, Toronto.

C. A. Young, Ottawa.

Final Examinations.

W. A. Atkinson, Barrie; A. R. Alguire, Cornwall.

W. J. Bell, Toronto; J. H. Brodrecht, New Hamburg; H. W. Burgess, Toronto; W. J. Browley, Hamilton; S. J. Boyd, Sutton West; A. C. Bennett, Toronto; M. R. Blake, Toronto; T. C. Brereton, Bethany; P. C. Bonghart, London; G. Boyd, Gravenhurst; Mary Bryson, Ottawa; F. L. Beer, London; A. W. Beattie, Pond Mills; Edith Beatty, Fergus; Elizabeth Bagshaw, Toronto; R. H. Bonnycastle, Campbellford.

W. H. Cameron, Arthur; H. D. Cowper, Welland; M. H. Cameron, Toronto; H. B. Coleman, Cookstown; D. G. Cameron, Wallacetown; J. Campbell, London; R. J. Carson, Sunderland; W. F. Clemesha, Port Hope; Mary Callaghan, Toronto.

J. M. Dalrymple, Bismarck; W. J. Dobbie, Guelph; W. Dales, Silver Hill; E. C. Dickson, Orillia; J. M. Dale, Oakwood; S. R. Dalrymple, Bismarck; D. L. Ewin, St. Thomas; H. M. East, Toronto; G. E. Eakins, Toronto; C. B. Eckel, Pembroke.

R. B. Fitzgerald, Sanborn, N.Y.; Geo. Ford, Toronto; J. F. Finnigan, Oshawa.

W. C. Gilday, Toronto; H. Glendinning, Valentine; W. J. Gould, London; W. E. Grimshaw, Wolfe Island; O. Glenn, Adelaide; A. J. Gilchrist, Toronto; C. A. Gaviller, Grand Valley; J. A. Gallagher, Toronto.

R. E. Hughes, Ottawa; J. E. C. Henderson, Hamilton; A. Henderson, Palmerston; J. F. Hogan, Kingston; E. Hixon, Glen Oak.

A. Keane, Essex; H. C. Kindred, Havelock; J. A. Kinnear, Toronto.

G. G. Little, Windsor; G. C. Leach, Fenella; L. G. Lauchland, Oshawa; M. W. Locke, Brinstin's Corners; R. C. Lowrey, Toronto; W. S. Lemon, Aylmer; W. S. Laird, Guelph.

W. Merritt, Smithville; A. C. Munns, Moorefield; G. L.

MacKinnon, Orangeville; G. D. MacLean, Woodbridge; R. J. MacLaren, Columbus; H. S. Mucklestone, Perth; F. W. Mohr, Ottawa; B. D. Munro, Toronto; R. J. Manion, Fort William.

T. T. McRae, Cranbrook; W. J. McCormick, Toronto; S. McCollum, Beaver Mills; W. B. McNaughton, St. Raphael; D. McKenzie, Morden; A. A. McIntyre, Milverton; W. E. McLellan, Almonte; D. F. McLachlan, Essex; J. H. McPhedran, Wanstead.

M. J. C. Naftel, Goderich.

W. J. O'Hara, Cayuga.

W. R. Patterson, Kingston.

E. C. A. Reynolds, Scarboro' Junction; Hanna Reid, Tillsonburg; L. G. Rowntree, London; H. L. Reazin, Toronto; J. D. Reid, Prescott; Olive Rea, Toronto; Minerva Reid, Tillsonburg.

E. Sutherland, Montreal; J. R. Stewart, Waba; J. Spiers, Drumbo; A. H. Spohn, Penetanguishene; G. S. Strathy, Toronto; C. E. Spence, Toronto; Chas. Schlichter, New Dundee; A. Sinclair, Kilsyth.

R. W. Tisdale, Lyndoch; R. A. Thomas, Toronto.

R. E. Valin, Ottawa.

A. L. Webb, Brighton; C. A. Wigle, Wiarton; A. M. Watson, London; J. W. Wigham, Toronto; J. L. Wilson, Toronto; W. M. Wilkinson, Woodstock.

C. A. Young, Ottawa.

THE FIFTEENTH INTERNATIONAL MEDICAL CONGRESS.

First Impressions of Lisbon.

A glimpse at the beautiful capital of Portugal in April suffices to show that the place chosen for the Fifteenth International Congress is more fitted for a week of pleasure than for a week of work; but in spite of the drowsiness inseparable from an almost tropical climate, and in spite of the fact that Lisbon is situated at a considerable distance from most of the great centres of science, our Portuguese brethren have risen to the occasion, and have extended a welcome as warm as could possibly be desired. First impressions are not always to be relied on, and, in spite of expressions of disappointment which I have heard from one or two Englishmen who have just arrived, I do not hesitate to say that the visit of the greater number of Congressists will leave behind it memories of the most pleasant character. Of the place itself a few words must be said. The town, built on seven high hills, faces the broad mouth of the Tagus. The lower parts bordering on the river still retain much of the character of an ancient town, especially in the narrow, ill-paved alleys and the primitive fish market which faces the landing stage. But the scene is rendered all the more impressive by the fish-wife and the work-girl of the lower order; she is of Oriental beauty (marred, it is true, in part by the dirty condition of her naked feet), costumed in bright colors with shawl and head cloth, and carries a surprising burden on her head with graceful ease. She ages early, but before the relentless hand of Time has made his ineffaceable marks she is a picturesque figure. And the children! Little imps of three feet high, with dark sensuous eyes, and knowing looks, dusky with the tan of the sun, they run about cunningly on their bare little feet. The girls, as a rule, wear a long skirt, with gaudy shoulder and head shawls, and look for all the world like tiny dolls of a former century. It was first in Oporto that I was so struck with these fascinating imps, and I found it difficult to keep my eyes open for the old-time architecture of the quaint town, which I had been told to study closely. The living things were more beautiful and more interesting. And why should one go to the galleries and see a fine painting of the Madonna on these lovely days, when one can see her exterior counterpart at every corner? The town hall and

post office next arrest one's attention—the former by its perfect harmony and symmetry, and the latter by its size. Then the Arch of Triumph on the north side of the Praza do Commercio. How imposing it is! But all this belongs to the guide book rather than to the Congress. The Avenida da Liberdale (Avenue of Liberty) is wonderful. Trees rich in pink and white blossom, huge palm trees, and a variety of other tropical growth produce a soothing and beautiful effect.

Opening of the Congress.

At 2 o'clock on the 19th, the King and Queen opened the Congress in state, in the large and magnificent Museum of the Geographical Society. The platform was decorated with rich red velvet on a basis of red carpeting, with furniture carved in a style in harmony with the surroundings. The spectacle was most impressive. Every conceivable uniform, with almost every conceivable order and medal, university gown and cap, ministerial (native) shawls, Catholic bishops and dignitaries in their robes, ladies in dainty Paris dresses, with their beautiful faces and graceful bearing, the ordinary man in the evening dress which is *de rigueur* on such occasions, and everybody decorated with the insignia of the Congress—what words can describe the varied scene? Each nation was adequately represented, not only on the platform but also in the mass of those in the body of the hall; and during the time that elapsed before the King and Queen arrived one had time to study the physiognomies of all the races—a study which was extremely interesting.

At 2.30 p.m. the National Anthem was played and every one rose to his feet. First a few Court officials passed along the central passage; they were in full civil attire. Then came the King, looking pleased and well, and greeting every one in a friendly yet dignified style. And then the Queen. If I have been somewhat effusive about the Portuguese ladies, I may be taxed justly with a weakness for the opposite sex; but there is no question of weakness or strength when one speaks of the Queen in the highest terms of admiration. Her beautiful face and figure, majestic and graceful, her delightful smile, her kindliness—all sent a thrill through every one present.

During the speeches that followed, the Queen bent forward and listened attentively, applauding at the termination of each, but there was something very human in the momentary relaxation of the interested, listening expression into one brimful of fun, and I might almost say amusement, whenever she

caught the eye of some of her ladies, or exchanged a brief word with His Majesty. The latter sat comfortably reclining in his chair, with his eyeglass immovably fixed in his left eye, without showing the least sign of boredom. Retaining his seat he opened the ceremony formally with his speech. There was a decorous silence during the delivery, and enthusiastic applause at the termination, but this appeared to have been the limit of restraint which those present could put on themselves. During the speeches which followed, a continuous hum or buzz of conversation was kept up, even immediately in front of the platform, while I was not a little amused to note that it was chiefly those who had paid the least attention to what was said who were the most energetic in their applause. French was the language chosen for the meeting, and the King used this tongue with a vivacity and smoothness which lent an especial charm.

The King's Speech.

His Majesty said:

"*Madame, Ladies and Gentlemen,*—In assembling at this Congress, which is so eminently scientific and humane, you are doing a noble and worthy action. Allow me, therefore, first of all, to congratulate you most heartily and to extend to you a frank and cordial welcome in the name of this country, of which I am the supreme magistrate.

"Among other things which have been handed down to us from the past as an inheritance, we find these magnificent festivities recurring in cyclical turn of events, and it is our duty to carry them out now.

"These gatherings emphasize the solidarity and intellectual unity of the nations, and the various peoples bring to them the best offerings of their work and endeavors. I once more repeat that this Congress is doing a good and noble work, for there is nothing more noble than a victory in the vast field of science, nothing better than the relieving of pain and suffering.

"I am certain that this learned assemblage will add a new and brilliant page to the book of universal science; and medical science will here review the thousand soldiers detached from her powerful army to come here to-day and pitch their tents under the shade of the Portuguese flag.

"Each one of you will relate the experiences of his struggles and tell of the glories of his victories—of the fights against disease, which are nobler than all the fights in which

the cannons vomit forth, in their firing and booming, suffering and death on the field of battle, fights in the quiet of the laboratory against infinitely small enemies, which every day cover the field with a larger number of dead than the greatest battles.

"During the six days during which the Congress is meeting here, days full of work, we shall see, as if in a kaleidoscope, facts, observations, analyses and investigations, all of which will arrange and group themselves in the most varying ways. They will dazzle our eyes, by the impression made of the actual position and extent of medical science, and will indicate to you and your colleagues the direction in which new conceptions and great victories are to be gained.

"The torrent of science, white and pure as that of the glaciers, which is represented by this assembly, where so many men of great fame have gathered together, will descend, as it were, from the extensive areas of many high summits; and the progress of it, like that of the glacier torrents—albeit slow—is irresistible, and forces pain and death to recede before its overwhelming might.

"Your brains are the grains of snow of the great torrent, brilliant and pure, and by the powerful action of your brains you inundate and burst asunder the skies, in which the secrets of Nature are hidden, and reveal them to view, often making human life longer, more tranquil, and stronger.

"You find yourselves in a country which knows your work and prizes it, and which, I can assure you, appreciates your actions most highly.

"Portugal is at one with you in your endeavors to carry out that which you regard as its international mission. She never forgets that her people are citizens of the world, and, as the citizens of each country have duties towards it, the nations have their duties toward humanity.

"Portugal was one of the first pioneers of the civilization of the world. She adheres to her old traditions, and with the help of these she receives you in your civilized mission, the aim of which is the welfare of humanity.

"As for myself, I am with you heart and soul, following your sciences with a profound interest. I admire you, I understand you, and I respect you, and I am deeply gratified to be able to assure you that you may depend on me for anything within my power which may assist you.

"And Her Majesty, the Queen, my well-beloved spouse, has shown you very plainly by her interest in the fight against

tuberculosis, which she has followed so closely, how she sympathizes with you with her whole heart.

"I do not wish to conclude without expressing my thanks to the Organizing Committee of the Congress for having asked me to preside at this inauguration of your work. I am deeply sensible of the task, and feel proud at finding myself presiding here to-day. Once again I add my heartiest good wishes to this Congress, in which my country is taking the leading part, and to which she is proud to receive you. I trust that the ultimate results of this Congress may be valuable to the cause of humanity.

"The Congress is open."—*B. M. J.*

Place of Meeting.

All of the work of the Congress took place in the new medical college, including registration and all executive business. The arrangements here were perfect and all officials courteous and obliging. The building is a modern one, and proved admirably adapted for the needs of the Congress. Business was conducted much more promptly and systematically than at Madrid. Exhibitions were conspicuous for their absence, and physicians who came here for the purpose of collecting a supply of proprietary medicines were sadly disappointed. The well-equipped laboratories were at the disposal of the delegates, who made free use of them in making their demonstrations. As all the sections met in the same building, it was easy to go from one to the other, either for the purpose of change of subject under discussion or to meet friends. It is true if the Congress had been large the space for the general meetings and section work would not have sufficed. As the attendance was small, ample room was given to each section with the exception, perhaps, of the military, which afforded scant space for sixty persons, and being the one which on an average had the largest attendance, it was sometimes badly crowded.

Scientific Work.

The subjects of the general addresses were modern and opportune. They comprised: "Relations of Acute Infectious Diseases with Tuberculosis," by Dr. Aaser, of Christiania; "The Prophylaxis of Yellow Fever as the Result of the 1905 Epidemic in Central America and New Orleans," by Professor Boyce, of Liverpool; "Infantilism," by Dr. Brissaud, of Paris; "The Mechanism of Reflexes and of Muscular

Tonus," by Professor Crocq, of Brussels; "The Significance of Domestication for Diseases of Animals and Man," by Professor von Hansemann, of Berlin; "The Anatomic Causes of Syphilitic Relapses and Methods to Follow to Combat Them," by Professor Neumann, of Vienna; "Local Anesthetics," by Professor Reclus, of Paris; "Radium in Biology and Medicine, or Organo-therapy of Our Days," by Prince Jean de Tarchanoff, of St. Petersburg. The oration for the United States was "A Plea for the International Study of Carcinoma." The programmes of all the sections, as usual, contained more material than could properly be disposed of even in six days. Many of the titles lacked the paper as well as the author. This vicious practice of sending in titles and names without any intention on the part of the prospective authors to attend the Congress should be suppressed.

Abused Privileges—Delegates and Members.

The present system of delegation of the Congress is wrong in more than one way. In the first place, any one can become a member of the Congress by paying the stipulated fee. This privilege, extended to laymen and physicians, increases the attendance without adding to the working force of the Congress. Many take advantage of this provision in order to secure reduced rates and to take part in the social entertainments of the Congress. Such attendance is a heavy ballast on the efficiency of the scientific work of the Congress and a source of discomfort to the legitimate members of the Congress—the delegates—as they crowd the railway trains and hotels and tax the financial resources of the Committee of Organization without giving an equivalent of any kind. Lay membership should be abolished. If this were done the doors to the Congress would likewise be closed to physicians who have no standing in the profession. In the second place, delegates from disreputable institutions find their way into the Congress, although they are not eligible to membership in the smallest and remotest county medical society. Restriction in the matter of appointment and acceptance of delegates should be strictly carried out at the next and all future meetings of the International Medical Congress.—*J. A. M. A.*

The Bull Fight.

I have just returned from the Villa Franca de Xira, where a special bull fight—or, as a German colleague and friend of

mine expressed it, "an affray of oxen"—was held. At half-past 12 we gathered together on the quay to embark in the boats placed at our disposal. The journey up the river to Villa Franca takes about two and a half hours, and is extremely interesting and picturesque. On the right-hand side of the river the country is as flat as Holland, and no towns or villages are visible; but, inasmuch as the river is very wide, one only sees a thin line marking off water from sky. On the left the hills are moderately high, and are very pretty. High up, when one nears the Villa Franca, windmills of a peculiarly fragile-looking type cap some of the hills. Half way we halted to get the whole fleet of eight boats together. Three of these were smallish launches, and the rest were like glorified L.C.C. Thames paddle boats, only bigger. A ninth boat had preceded the fleet. Each member was presented with a cardboard box containing half a bottle of excellent white wine, a couple of croquets of sorts, two rolls with ham, and some pastries. Drawing near the village, lines of peasants in their picturesque garb, mounted on horseback, line the bank, cheering and waving as we passed. Then volleys of rockets were sent up into the air, until the noise became deafening, but one only saw the smoke, travelling in lines and then diffusing. The arena was next seen, gaily decked in multitudinous colors, with the royal flag of red with a yellow crown flying on high. A band played as we passed. At the landing stage hundreds and hundreds of the people had gathered to greet us, and the variegated picture was rendered more charming by the presence of sailing boats, decked with flags, which sailed by us as we waited our turn to get in, saluting by lowering the flags. These boats took some of the members ashore. At last we steamed up, and the kindly Portuguese greeted us heartily as we passed between the two throngs, so that one had to bow an acknowledgement at every few paces. Flags, draperies from the balconies, garlands and bright dresses filled the scene with color. As we walked along dark-eyed girls and matrons, comely to look at, pelted us with rose-leaves and every now and again threw roses to one of us. The Southern sentiment was so infectious that I could not resist throwing a kiss to some of the gentle creatures, and was rewarded by a bombardment of roses, so that I had to secure them inside my hat lest they should get lost in the carrying. The sight was so dramatic, so intensely characteristic, so unaccustomed, that we felt as if we were some powerful princes of the middle ages and the villagers our subjects. Here, as in Lisbon and Oporto, a large number of cripples and a few lepers were to be seen, and

although the poorest had come out to meet us there was very little begging. Then we found our places in the amphitheatre. Throngs flocked in from all sides, and tier upon tier filled up, till, at about half-past four, the house was quite full. About five thousand persons were present. The royal box opened, and the King, Queen, and Queen Mother, with the two princes, and two gentlemen-in-waiting, took their places. A very noisy band had disturbed my peace of mind during the interval of waiting, and then the military band set up in a special compartment. The distances were much too great to see the audience in detail, but the massed impression one gained was splendid. The sun screens had been erected without a thought of the wind, and the light blue and white fabric was wafted high up into the air, leaving us exposed to the scorching sun. The galleries were hung with blue cloth, on which large red, white, and yellow artificial flowers were sewn. The royal box was worked in red, blue and gold. The programme consisted of fancy riding by distinguished amateurs, mostly titled men, dressed in the peculiar garb of the bull-ring; sparring with long sticks by men on foot, a sport which does not appear to have a definite aim or end; and the bull fights. The Portuguese bull fight is a tame affair. Men, horses, and beasts are all well trained, and the only criticism one can make is that it is a shame to worry the bull. The bandarilheiros were very picturesque and skilful, and graceful withal. One of the six bulls was very fresh on starting and followed one of the men over the arena boundary, sending all the attendants, police, and others flying in all directions. I am told that the little wounds are treated and healed, and that the bulls serve again and again for the purpose, although the supposed regulations are that the bull is slaughtered after and the meat given to the poor. The game of the rose was very pretty. Three horsemen appeared, and a rose was stuck into the coat of one of them, which the other two attempted and succeeded in snatching it away. All the horses were splendid Arab steeds, and pranced and danced very prettily. Each performer received a large bouquet after his performance. Then we left. The walk to the station was dusty and thirst-giving, and one felt that the show had been too long. Three-quarters of an hour in over-filled trains brought us back to Lisbon ready for dinner, and satisfied with the experiences of the past seven and a half hours. The villagers distributed a pretty little poem to us as we passed, in which they greeted us, frankly and warmly, as the protectors of humanity; the mothers bless us, and the people call us their benefactors.

Garden Party at the Palace.

A more picturesque, impressive, or splendid sight than that which presented itself in the grounds of the Pago das Necessidades on the afternoon of April 24th can seldom be met with. The grounds themselves are exquisite with tropical growth, beautiful beds of flowers, and magnificent trees. Add to this the picturesque uniform of countless servants of the household, and a sort of civil guard, and the picture gained in brilliance. Still further, imagine a crowd of some four thousand guests, among which were soldiers in the uniform of every country, stately *savants* in civil, and good-looking women in the daintiest of fashionable attire, and the impression becomes yet more striking. But the crowning point of all was the beautiful, fascinating, gracious and graceful Queen herself, who, with the King, Queen Mother, two Princes and Prince Alfonso, greeted her guests in a supremely charming manner. Every one was loud in praise of Her Majesty, and, however extravagant that praise may have sounded, it was certainly not exaggerated. With a never-failing memory, she shook hands with hundreds of her guests, always saying appropriate words, which fitted exactly to the guests, and always smiling sympathetically and regally. One can only say that she is every inch a Queen. Your humble correspondent was honored by being allowed to kiss her hand, and it did him good. Three bands refreshed the air with tuneful harmonies, and the inner man (and woman) was more substantially refreshed at the lavish buffets, which provided a feast unusually solid for an afternoon, and yet dainty.

Editorials.

THE INTERNATIONAL MEDICAL CONGRESS.

The Fifteenth International Medical Congress was held in the beautiful and picturesquely situated city of Lisbon on the 19th to 26th April. We talked with representatives from nearly all countries, from Japan, Greece, Italy, Germany, England, Servia, Austria, France, Belgium and America, and all were agreed that the Congress was well organized, perhaps too minutely organized, having as many as eighteen different sections. The detail work in connection with the meetings must have been enormous; and the details were all so tied up with red tape, which only the tactful secretary-general could unfasten, that it goes without saying that he was besieged by interviewers from early morning until late at night; but each morning he returned to the work smiling, and apparently not the least disconcerted, exercising great astuteness in the laborious office which he so well honored. His knowledge of the German and English languages was but meagre, and the confusion at times was most interesting, and not a little amusing to the quiet observer. Not all of his interviewers spoke French, which was the official language, or Portuguese or Spanish. Some of the English brought their insularities of speech, and appeared bewildered in the Babel of tongues. The British delegates numbered about sixty, and many of them would have had a sorry time of it had it not been for the quartette of young English ladies who were in the Rotunda of the School of Medicine, where the sessions were held, and who acted as interpreters. The Canadians, of whom there were five, had among them an acquaintance with Italian, Spanish, French and German. The Americans, who numbered about thirty, were marshalled and well looked after by the astute Guiteras of New York, who, in addition to being eminent in his profession, is a noted linguist, and speaks Spanish and Portuguese with the fluency of a native brought up on the wine of the country.

The meeting, which was entertained royally by the authorities of Portugal, and inspired constantly by the interest taken by the beautiful Queen of Portugal, may be truly said to have been socially an immense success. Receptions, concerts, socials, garden parties and bull fights there were galore, and the delegates will carry home with them lasting recollections of the hospitality so generously extended. But it may be further said that the British Ambassador contributed practically but little to the enjoyment or pleasure of the British visitors, which was in marked contrast to the many social courtesies extended to the visitors from this continent by that cultured and capable diplomat, Col. Bryan, the American Minister.

With regard to the Queen of Portugal, Dr. Nicholas Senn's tribute to this royal personage, which appeared in the *J. A. M. A.*, was such a beautiful photograph of Her Excellency that we copy it here:

"Queen Amelia is a remarkable woman physically and mentally. She is above average size and weight, and every look and movement denote a noble bearing. A scion of the noblest and most aristocratic family in France, she was trained from earliest childhood for her present exalted position. The large black eyes, firm, well-formed lips, high forehead and luxuriant jet-black hair, sharp, perfectly modelled nose, heavy eyebrows and long lashes, pearl-white perfect teeth, round chin, fair compexion, and perfect form of face make up a picture of classic beauty. She is one of the most intellectual women of the present age. She speaks several languages, among them excellent English; is a member of the medical profession, in which she takes the keenest interest, and is a trained nurse as well. A picture in which she delights, and which is very popular among her subjects, is the Queen dressed in the garb of a nun rendering first aid to the wounded. The hospital and clinic for patients suffering from tuberculosis is her own creation, built and maintained out of her own private means. She is the mother of two sons, the Crown Prince, now 18 years old, and his brother, two years younger. She is a devoted mother, giving her own attention

to the education and training of her children. She is very wealthy in her own right, and makes free use of her wealth in relieving the sick and poor."

To the enquiry, Was the Congress a success from a scientific standpoint? it must be said that there was a considerable difference of opinion on the point, and therefore a few extracts obtained from various sources are given, embodying the views of experienced Congressists present, of those who have attended many such meetings, and who are well able to form an impartial judgment on the shortcomings, and the many excellent features of the late meeting.

The next meeting of the Association will be held in Budapest in 1909. The Canadian members of the Congress who were present in Lisbon will act as a temporary committee in connection with this Congress. The invitation from Hungary was made official by the Government, which had already appropriated $50,000 for this purpose. The hospitality of the Hungarians is said to be unbounded, as will no doubt be the testimony of those who may find it convenient to attend.

W. H. B. A.

THE ONTARIO MEDICAL COLLEGE FOR WOMEN.

An event which demands more than a passing notice is the closing of the doors of this institution. The College was organized in 1883, under a slightly different name, by the late Dr. Michael Barrett. It was organized in order that those women who desired to study medicine might do so in their own country and in a college of their own, for co-education in medicine was not then popular. The difficulties to be overcome were very great. Funds had to be gathered, a suitable building secured, a board of trustees elected and a faculty organized. Aided by friends who sympathized with the object, however, all difficulties were overcome, and on October 1st, 1883 the Women's Medical College opened its doors. The faculty consisted of: Dr. M. Barrett (President), Physiology; Dr. George Wright, Practice of Medicine; Dr. I. H. Cameron, Surgery; Dr. A. H. Wright, Obstetrics and Diseases of

Women and Children; Dr. A. McPhedran, Materia Medica and Botany; Dr. J. T. Duncan, Anatomy and Microscopy; Dr. R. A. Reeve, Diseases of Eye and Ear; Dr. R. B. Nevitt, Sanitary Science; Dr. F. Krauss, Jurisprudence and Toxicology; Dr. Augusta Stowe-Gullen, Demonstrator of Anatomy; Mr. A. R. Pyne, Chemistry. The first Board of Trustees consisted of Rev. Dr. Caven, Mr. James Beatty, Dr. Barrett, Dr. G. Wright, Dr. Adam Wright, Dr. I. H. Cameron, Mrs. Gooderham, Mrs. McEwen, and Mrs. Harvie.

Dr. Barrett remained President of the Faculty until his death, when Dr. McPhedran held the position for a short time. Upon his resignation Dr. Nevitt was elected Dean, which position he has since held. The building was a small brick one, just opposite the eastern gate of the Toronto General Hospital. The opening exercises of the College were held in the theatre of the Hospital, and the college lectures commenced the following day, with an attendance of *one* regular student. This was not encouraging, but in the following year three entered. The attendance gradually increased, until an incoming class of eight to ten was the rule, which gave a total number of students in any one year of between thirty and forty. The old building had become inadequate, and in 1889-90 a new building was erected on the site of the old one, that building having been moved back to form a dissecting room. The new building was complete, commodious, and contained excellent facilities for the teaching of medicine. Excellent clinical teaching was provided for in the various hospitals of the city, and the staff was constantly being added to as needs arose. Among those added may be mentioned: Dr. J. F. W. Ross, Dr. Wishart, Dr. McMahon, Dr. Cleland, Dr. G. B. Smith, Dr. A. A. Macdonald, Dr. Machell, Dr. Eadie, Dr. Susanna Boyle, Dr. Lelia Davis, Dr. Jennie Gray, Dr. Ida Lynd, Dr. Lelia Skinner, Dr. Minerva Greenaway, and Dr. Helen McMurchy.

The College was affiliated with Trinity, and, later, with Toronto University, thus giving students a choice in regard to their degrees, every provision having been made, indeed, for the medical education of women. In spite, however, of

the excellent laboratories and facilities of the building, in spite of the admirable and thorough clinical and didactic teaching they received, the tendency has of late been towards the University Medical College. Co-education in medicine is not so unpopular as it was a quarter of a century ago. Recognizing this, the University Commission recommended that the women students of medicine attend University Medical College. The Ontario Medical College for Women has agreed, and its doors are now closed.

The College has done a good work. For twenty-three years it has, unostentatiously, but none the less effectively, carried on the education of those women who desired to study medicine. Its graduates now number more than one hundred and twenty, scattered all over the world, many of them holding high positions in the missionary and medical world.

THE BRITISH MEDICAL ASSOCIATION.

There are probably few people in Toronto, and certainly none in the medical profession, who will have any difficulty in "thinking imperially" on and after August 21st, 1906. A meeting which will bring together representatives from the British Dominions in Egypt, India, China, from Australia, New Zealand, Canada, England and Wales, Scotland and Ireland, will help to make Imperial history. Nor are these the only guests whom Toronto will delight to honor in August. It is now almost certain that we shall have two representatives from Greece and one from Japan, as well as a number from other European countries. From the United States a strong and distinguished representation will be present by invitation. These invitations have been issued by the President-elect of the British Medical Association to the members of the constituent societies of the American Medical Congress (which meets every three years), and acceptances are arriving daily at the medical laboratories. The Membership Committee report a probable Canadian representation of 1,000, and it is now thought, judging by a cable just received

from Mr. Guy Elleston, that the number who will come to us from Great Britain will be about 500.

These facts give augury, if any further augury were needed, of a successful meeting; indeed, the General Secretary in Great Britain is said to have expressed the opinion that we are on the eve of the greatest meeting in the history of the Association, an opinion that we shall all do our best to justify when registration opens on Saturday, August 18th. Already the membership of the British Medical Association comprises considerably more than half of the whole medical profession in Great and Greater Britain. Its objects are to promote medical science and allied departments of knowledge, and to maintain the honor and interests of the profession. We hope that the medical profession in Canada will take this favorable opportunity to join the British Medical Association almost in a body and remain permanently in the membership, thus securing for themselves and the Association the maximum benefit from this memorable meeting.

To our guests THE CANADIAN PRACTITIONER bids the warmest and kindliest of welcomes. Blood is thicker than water, the bonds of professional life and work are strong and true, and the relation of host and guest is, and ought to be, a happy relation. A hundred thousand welcomes to our thousand guests.

THE ANTI-VACCINATIONIST.

The anti-vaccinationist is with us still. Along with the Christian Scientist, the Theosophist, the Faith Healer, and many other fakirs, still doth he revisit the glimpses of the moon. It is a serious question whether the profession do altogether wisely to hold their peace in the dignified way they do while the blatant and untiring tongue of uninstructed and unthinking persons proclaims to the well-meaning citizen a great many things that are not so. It was hoped that the new Board of Education in Toronto would be a great improvement on the Collegiate Institute Board and the Public School Board. We do not see much evidence of it so far. We can recall a

great many gentlemen on both of these Boards in years gone by who would have been incapable of voting for the recent action of the Board in regard to no longer requiring scholars to present a certificate of vaccination. There is no doubt that unless this action of the Board is speedily reversed, the community will have great and perhaps tragic reason to regret it. Just because vaccination has been observed and we have been protected by it, people have forgotten that the protection from smallpox is due to vaccination.

This matter should not be forgotten at the elections next January. Trustees who are then elected should understand what vaccination is and why it is necessary in the interests of the community.

NOVA SCOTIA EN AVANT.

One of the seaboard Provinces of Canada, from which many a Canadian statesman, churchman and man of affairs comes, has been the first to take advantage of the British Medical Act Amendment Act of 1905. The mode of procedure was surrounded by many safeguards, and consequently was a little slow, but the proceedings are all over now, for we are informed by the *British Medical Journal* of May 19th that His Majesty the King made an Order-in-Council on May 11th, 1906, declaring that the Province of Nova Scotia shall be deemed a separate British possession, and applying the second part of the Medical Act of 1886 to Nova Scotia, it being His Majesty's opinion that it affords to the registered practitioners of the United Kingdom such privileges of practicing in Nova Scotia as to His Majesty seem just.

As it is further stated that before taking this action His Majesty's Privy Council communicated with the General Medical Council, and the latter august body declared that they heard of the application of the Nova Scotian authorities (through the Governor-General of Canada) with satisfaction, we see that the thing is done in fact as well as in name.

The Executive Committee of the General Medical Council have also stated their intention, as soon as the Order-in-

Council should be issued, to take all necessary steps to ascertain what qualifications granted in Nova Scotia should be recognized. We shall await this decision with interest. Meanwhile let us congratulate the profession in Nova Scotia on medical reciprocity with Great Britain. Who will be next?

SCHOOLS, GARDENS AND PUBLIC PLAY-GROUNDS.

The Board of Control of the City of Toronto have, with commendable liberality and foresight, offered to purchase playgrounds for the children in that densely populated district of the city bounded by Queen, Yonge and College Streets and University Avenue. Whosoever is responsible for this proposal is a public benefactor, and we cordially welcome the prospect of this public boon, and look with immense satisfaction on the proof which this step affords of a new and better day in city affairs. There are many little children in St. John's Ward. They have at present no playground but the streets. Many of them are the children of foreigners. Often they are without much care or supervision, and in that very neighborhood, a year or two ago, a little child was run over and killed by a heavy waggon in the street.

The Board of Education might be reasonably expected to take charge of these playgrounds when they are acquired. Space and grass and trees, a shady place to play, are all that is required; but some kind and experienced woman should be in charge of the little park and the children, to take the place for the time of the parents and see that the children do not get hurt or use bad language, or do anything else that might make a good mother hesitate to let her children go. Again, these grounds should be reserved for children. No loafers should be allowed to monopolize places there. The benefit of such breathing-places from a health point of view would be very great.

In this connection the subject of school gardens comes up for consideration. The Macdonald Rural Schools in different parts of Canada are wisely remembering the fact that boys

and girls should be taught so that the school shall be in the closest connection with the interests and work of the home. The garden teaching at the Macdonald schools is on the right line. The garden plots for each scholar in many of the schools in Cleveland, St. Louis, Philadelphia, and other American cities are not only a valuable part—perhaps the most valuable part—of the great industrial movement in education. They are a great and wise provision for the development of the physical and mental powers of the individual. You will find few neurasthenics, consumptives or melancholy patients who own and work in a garden plot. For children, when one thinks not only of their present but of their future, the school garden is going to be a powerful force for good. We hope to see this movement, which began in Austria and other European countries about twenty-five years ago (there are now 100,000 school gardens in Europe) and which on this continent began with Arbor Day in Nebraska, the first school garden proper being begun twelve years ago in Massachusetts in connection with the George Putnam Grammar School, and which has now been recognized in Canada as part of the work of the Macdonald Rural Schools, go on and prosper greatly in this country.

PRACTICAL INSTRUCTION IN OPERATIVE SURGERY.

How to produce a skilful operator from the raw material of the medical schools is no easy problem. The surgical staff of the Johns Hopkins Medical School and Hospital have for some time been endeavoring to give students practical surgical training in operative technique by means of operations on living animals, especially dogs, both in health and in disease. Dr. Harvey Cushing has had the direction of this course, which is an attractive one, and has certainly met with success, for a new building, chiefly for this purpose, called the Hunterian Laboratory of Experimental Medicine, has been added to the Johns Hopkins Hospital buildings.

Animals have rights, which doubtless are not ignored in this

or any other part of the excellent medical course at Johns Hopkins.

Dr. Cushing is a brilliant and original worker in the surgical field. No one who has attended even his didactic lectures on surgery could well avoid profiting by his enthusiastic and able teaching. Ambidextrous at the blackboard as well as at the operating table, Dr. Cushing teaches there like a master, and has before now taught new things to the profession as well as to his students.

Veterinary medicine and surgery should certainly profit by this new departure, and our general knowledge may also be enlarged.

NOTES.

The Blue Book of the Empire.

A great achievement about which little has been said is the new Blue-book containing a census—or rather a summary and digest of all the census returns—for the British Empire. It is interesting enough to justify the remark of the *Birmingham Daily Post* that it might be called the "Romance of a Nation."

This is the first time that this Blue-book has been issued, and the documents on which it is based range from the smallest, a pamphlet of ten pages, which is the census of the Falkland Islands, 2,253 inhabitants, to the sixty volumes containing a mass of information about India, dealing with 295,000,000 people, who speak 147 different languages.

In the last forty years the territory of the Empire has increased nearly one-half, and is now one-fifth of the land surface of the earth. Its population is now about 400,000,000, 300,000,000 in Asia, 43,000,000 in Africa, 42,000,000 in Europe, 7,500,000 in America and 5,000,000 in Australasia. As it lies before us this Blue-book is smaller than most, but to any enlightened citizen of the Empire few Blue-books are more valuable. We have naturally been most interested in pages to which no great allusion has been made in the public press. The birth-rate, the death-rate, the proportion of men

to women, of married to single, of different ages to the whole population, etc., have occupied our attention. The dwelling-house question is dealt with in a series of interesting tables.

The cost of the Blue-book is 3s. 5d., and anyone may order a copy from the King's Printer in London.

The Jungle.

The horrors of Chicago canned meat products, both in connection with the packing-houses and the slaughter-houses, have at last attracted public attention, chiefly through the publication of a work of fiction bearing the above title. The *Lancet* published letters from a special commissioner telling the same truths a year or more ago, but the pen of the novelist, like the pencil of the cartoonist, has a unique power of impressiveness. The greed for unlawful and excessive gain, the worship of the golden calf, is responsible for the scandalous and horrible state of things from which the mask has now been torn. To live for this present evil world, to can meat for other people to eat that we would not want to eat ourselves, and other more subtle ways of breaking the Golden Rule, have brought to this pass a great and increasing industry from which many people might justly have made an honest livelihood and even justly amassed considerable fortunes. The action of the President of the United States should stimulate all civilized countries to more careful inspection of all food processes and products.

Reunion of the Class of 1881.

The graduates of the University of Toronto of 1881 held a reunion and dinner, June 7th, in the Faculty Union, fourteen of the original fifty-five members being present. This was the second dinner of that class, the first one having been held five years ago. Eleven of the original members have died. Those who were present were: J. A. McAndrew, Prof. Maurice Hutton, A. G. Campbell (Harriston), Dr. J. M. McCallum, S. J .Young (Trenton), J. Nason, F. W. G. Lawrence, Prof. W. S. Milner, W. D. Gwynne, John Douglas, T. J. Blain (Brampton), Rev. Walter Laidlaw (Secretary of the Associated Federation of the Churches, New York), Dr. Samuel Stewart (Thamesville), and I. M. Levan (Woodstock).

New Physics Building.

The contractors for the new $200,000 Physics Building for the University of Toronto commenced work last month. After taking away the trees and fences to the west of the Observatory

Building, the old wooden building to the south was removed, and the roughcast building which stands to the west of Convocation Hall will be used as an overflow office by the officials of the Meteorological Station.

New Wing for Nervous Diseases at the General Hospital.

The opening of the new wing for nervous diseases took place at the General Hospital, June 14th. The function was purely informal. Hon. W. J. Hanna, his Worship Mayor Coatsworth, Mr. J. W. Flavelle, Dr. Bruce Smith, and a number of other prominent citizens were present and inspected the new wards.

A great deal of interest is taken in the new department. It is the first one of the kind to be fitted up in connection with a Canadian hospital, and the only other one on the continent is in Albany, N.Y. Only cases of acute nervousness will be treated in the wing, and the work will be looked after by Dr. D. C. Meyer, and Dr. E. C. Burson, the senior resident doctor.

Dr. O'Reilly's old house at the eastern extremity of the hospital was fitted up as the new wing, and contains two private and two public wards, with accommodation for twelve patients.

University of Toronto Alumni Association.

The Alumni Association held its annual meeting on June 7th, at which these officers for the year 1906-7 were elected: Honorary President: James Loudon, M.A., LL.D. President: R. A. Reeve, B.A., M.D., LL.D. Vice-Presidents: I. H. Cameron, M.B., F.R.C.S., Toronto; J. M. Clark, M.A., LL.B., Toronto; James Mills, M.A., LL.D., Guelph; Hon. Chief Justice Hunter, B.A., Victoria, B.C.; F. Barlow Cumberland, M.A., Port Hope, Ont.; Hon. J. D. Cameron, B.A., Winnipeg, Man.; his Honor Judge Chisholm, LL.B., Berlin, Ont. Secretary-Treasurer: J. C. Maclennan, M.A., Ph.D. Executive Council: Miss C. M. Woodsworth, B.A., Miss Julia S. Hillock, B.A., Miss M. Cartwright, W. J. Alexander, Ph.D., E. N. Armour, B.A., Rev. R. P. Bowles, M.A., B.D., F. C. Colbeck, B.A., Rev. Eber Crummy, B.A., B.Sc., Rev. H. J. Cody, M.A., A. P. Coleman, M.A., R. A. Gray, B.A., H. F. Gooderham, B.A., D. B. Gillies, B.A., Thomas Langton, M.A., LL.B., H. T. Machel, M.D., T. J. Mulvey, B.A., S. J. McLean, B.A., LL.B., Gordon Osler, W. Pakenham, B.A., D. Paed., T. A. Russell, B.A., James Ross, B.A., Charles Sheard, M.D., C.M., M.R.C.S., Harold Clark, D.D.S., F.N.G.

Starr, M.D., J. F. M. Stewart, B.A., G. Oswald Smith, M.A., F. H. Torrington, Mus. Doc., S. C. Wood, B.A., LL.B., S. M. Wickett, Ph.D., W. T. White, B.A.

An amendment to the constitution, moved by Prof. A. B. Macallum, was adopted, providing for the filling by the Executive Committee of any vacancy occurring in it between annual meetings by resignation or death.

A vote of thanks was extended to the Government and the Legislature of Ontario for the liberal financial provision made during the last session for the immediate necessities and future expansion of the university.

The Executive Committee's report noted considerable development in the Alumni Association's scope and influence.

An Ambulance Service for London.

At last London is about to adopt the ambulance system. A bill providing for the purchase of ten automobiles for such use has just passed the House of Commons, and it now rests with the upper branch of Parliament whether the old method of conveying injured persons to hospitals by means of portable stretchers will be supplanted by the modern apparatus. The success which seems about to crown the movement in favor of ambulances is largely due to the untiring labors of Dr. Henry Nachtel, of Paris. Dr. Nachtel is a prominent physician in the French metropolis. He has sought for nearly thirty years to induce the British Government to provide ambulances for the use of London. He succeeded in having it introduced in Paris about fifteen years ago, but his efforts until the present time in England have gone for naught.

Spring Examinations at the University of Toronto.

The following have passed the examination of the fourth year in the Faculty of Medicine of the University of Toronto:

D. C. Balfour, Miss M. B. Beattie, D. Black, F. B. Bowman, W. E. Browne, J. C. Calhoun, A. A. Campbell, Miss B. Campbell, K. Campbell, V. E. Cartwright, C. G. Chapin, R. O. Coghlan, G. Cooper, J. W. Counter, J. G. Crookshank, F. B. Dawson, E. C. Dickson, R. H. Dillane, J. Duncan, R. G. Edwards, G. H. Gardiner, E. D. Gillis, M. R. Graham, C. S. Hawkins, A. Henderson, M. S. Henderson, J. H. Holbrook, R. L. Hutton, J. H. H. Jackson, E. T. Jessop, R. A. Jones, D. M. Kilgour, C. G. Kirkpatrick, H. J. R. Lindsay, J. D. Loudon, W. A. McClure, G. C. MacIntyre, D. McKenzie, M. A. MacKinnon, H. MacLean, R. J. MacMillan,

H. M. McNeil, S. J. N. Magwood, L. Main, F. W. Manning, J. C. Masson, F. H. Mayhood, A. S. Moorhead, F. J. Munn, Miss C. B. Murdock, A. Pain, W. C. Pratt, A. B. Rankin, W. H. Reid, W. T. Rich, A. T. Ripley, J. X. Robert, A. H. Rolph, J. D. Russell, H. A. Stewart, J. H. Storry, A. A. Thibadeau, F. B. Thornton, C. A. M. Thrush, T. C. Weldon, F. Woodhall. A. Mitchell completed the third examination as conducted by the University of Toronto, and was entitled to admission to the degree.

Medals.—Faculty gold medal, H. M. McNeill; first faculty silver medal, J. H. Holbrook; second faculty silver medal, E. C. Dickson; third faculty silver medal, A. S. Moorehead.

Scholarships.—First year, W. F. M. Marcy, R. McTavish, C. A. Harvie (aeq.); second year, J. G. Herkness, W. A. Robertson.

Post-graduate Scholarship.—The George Brown Memorial Scholarship in Medical Science, E. C. Dickson.

Graduates of Trinity.—Honors—Robert William Mann (gold medal and certificate of honor), Norman James Heattlie, Archibald Duncan McCannell, Victor Alwyn Mason (aeq.), silver medal and certificate of honor. Class I.—William Albert Lewis, William Perot Kaufmann, Henry Howard Galloway, Herbert Stanley Monkman. Class II.—Miss Mellissa Mabel Manderson, Edward Joseph Madden, Miss Alice Baxter (aeq.), George Wellington Huston, Edwin George Hodgson, Robert Colwill, Donald Allan Murray, Richard Russell Smale, Miss Lily Ethel Taylor (aeq.), James Spence, Cyrus William Slemin, David Edwin Howes, Robert Elmore Wodehouse. Class III.—William Edward Bryans, Miss Rachael Rogers Todd (æq.), Walter Bingham Kendall, John Thomas Courtice, George Gordon Malcolm, has to complete matriculation; Frederick Alexander Douglas, Miss Ak Mae Wong, Arthur Buckham McLean, Reginald Stipe, Clare Annis Langmaid, James Freeborn McKee, Hamlet D. Thompson, Frederick George Vernon. C. R. Cumming and N. D. Frawley completed the examination of the fourth year, M.D., C.M.

Hospital for Sick Children.

The Trustees of the Hospital for Sick Children have appointed the following staff for the year commencing 1st July, 1906: Consulting staff, surgical, Dr. R. B. Nevitt, Dr. G. A. Peters, Dr. N. A. Powell; medical, Dr. A. McPhedran, Dr. H. C. Scadding, Dr. R. J. Wilson. Surgical services, No.

1—Mr. Irving H. Cameron, senior; Dr. A. Primrose, associate; Dr. B. Milner, junior. No. 2—Dr. G. A. Bingham, senior; Dr. F. N. G. Starr, associate; Dr. Charles Shuttleworth, junior. (The surgical services are co-equal in status. They are numbered separately for convenience.) Orthopedic service—Dr. Clarence Starr, senior; Dr. W. Gallie, Toronto, associate. Medical services, No. 1—Dr. H. T. Machell, senior; Dr. W. B. Thistle, associate; Dr. R. D. Rudolf, junior. No. 2—Dr. Allan Baines, senior; Dr. J. T. Fotheringham, associate; Dr. H. C. Parsons. (The medical services are co-equal in status. They are numbered separately for convenience.) Isolation Wards—Medical, Dr. William Goldie, Dr. C. J. Copp, associate; Surgical, Dr. S. Westman, Toronto. Specialists—Eye, Dr. R. A. Reeve, senior; Dr. James MacCallum, associate; Dr. W. Lowry, junior; Ear, Nose and Throat, Dr. G. Wishart, senior; Dr. G. Boyd, associate; Dr. D. N. MacLennan, junior. Patholoigst—Dr. T. D. Archibald. Anesthetist—Dr. Alan Canfield. Registrars—Surgical, Dr. E. Stanley Ryerson; Medical, Dr. H. S. Hutchison. Director of the Roentgen Rays Department—Dr. Samuel Cummings. Residents—Dr. A. C. Bennet, from 1st January, 1906, to 31st December, 1906; Drs. A. H. Rolph, James C. Masson, Robert E. Woodhouse, for one year each, from 1st July, 1906, and R. A. Jones and Fred W. Manning, for one year each, from 1st January, 1907.

Canadian members of the British Medical Association who intend to avail themselves of the special rate ($67.25) single fare excursion to the Pacific Coast at the close of the meeting in August, should communicate their intention at once to the General Secretaries, Medical Laboratories, University of Toronto, in order that information may be given to the railways of the probable number for which provision must be made.

A EUROPEAN TOUR OF WORK AND RECREATION.

If asked what features of the Lisbon Congress are most prominent in one's memory, I would answer : the Queen of Portugal, the frieze of the faculty room, and the desire of our Portuguese confrères to make everything smooth and agreeable,—in which they succeeded. There was a want of co-ordination in the initiation of the railway rebates, renewed here and there with fresh "station chiefs": otherwise all worked to perfection; the frieze of the faculty room is a splendid history of medicine and surgery in colors; and the Queen is "every inch a queen."

I was told by Lisbonians outside the profession that Prof. Bombarda had worked himself almost to the point of breakdown to insure the success of the Congress. I hope he felt somewhat rewarded by having attained it in so marked a degree. It may seem invidious when all (assistant secretaries and everybody)—did so much, for us to single out any by name; but in my work I came so much in contact with Prof. Ricardo Jorge, of the Maritime Disinfection Service, and Superintendent of the Museum of Hygiene, and with the Director of the Contagious Diseases Hospital (or Village, one might say), Dr. Lopez, that I may be allowed to refer to their kind offices; as also to record my thanks to Mr. Alexander Pyrrait, who showed us so much courtesy.

A member of your staff has a good stock of observations of the Iberian continent, so I will merely say that my party returned by way of Coimbra, the picturesque university town of Portugal. The dress of the students on the street was as much an object of interest to us as I suppose ours was to strangers in the days when our students used constantly to wear cap and gown. The uniformity extends beyond the cloak and bare head to the black frock-coat and trousers and high-buttoned waistcoat. To Coimbra we were accompanied by Dr. J. Hubbard, of Forest, Ontario, who merited and received literally the hugs of the natives for his proficiency in the Portuguese and Spanish languages. I must hurry past the lines and Torres of Wellington, past Fuentes d'Onor, the fortified Ciudad Rodrigo, and through Salamanca, all names to thrill with a pardonable pride the breast of a freedom-loving Briton; past the treasures of the Escorial the large-planned city of Madrid, to Algeciras. Whilst so many visit Madrid and the storied Granada, Cordova and

Seville, few avail themselves of the magnificent wildness of Ronda, with its gorges and old Roman bridges. To intending tourists I would say, take a few hours at Ronda. By this route we returned to Gibraltar and sailed for Genoa and Naples. We drove out from the elegance of the shopping and residential portions of Naples to Vesuvius, through the squalid suburbs to Portici, a portion of which overlies Herculaneum. We traversed the greater portion of the inclined railway; a fractional part of it was still buried beneath the recent showers of dust and ashes, and the funicular railway is entirely destroyed. On the following day we met Dr. Cuthbertson, of Chicago, a Toronto graduate, and together we traversed the excavations of Pompeii, and thence drove up to the recently ruined village of Boscotrecase, and walked across the still hot and smoking debris of lava, by the broken-up masses of which, as by an ice-jam floated down stream, the walls of the opposing houses were crushed in.

Rome and Florence have been so often and so well described that I will not attempt them. We stopped again at Bologna, with its odd, angular leaning towers and its memories in the old Archiginnasio of Vesalius, Arantius, and Malpighi, of Galvani, and, in the far-off haze, of "the Dante." For two weeks we enjoyed the beauties of Switzerland and the unique Venice, with its memories of Middle-Age greatness, not yet wholly disappeared. I ran over to Padua to visit the scene of the early footsteps of dear old Prof. Forneri—my visit and the old university I hope to describe in our *University Monthly*. Please do not say anything of my "going through" on the platform there. From Venice and Padua we went to Milan, one of the objects of my trip being

THE INTERNATIONAL CONGRESS FOR THE DISEASES OF LABOR

in that city. Years ago it was a surprise to some of us to find the Italians forging ahead amongst the alienists, and again taking such a prominent place in bacteriological and pathological research; as witness their work in connection with researches and clinical experiments connected with malaria. And now they have inaugurated and successfully carried through the first International Congress for considering the "physiological and pathological" conditions connected with special industries and spheres of work (physical and mental), and the hygienic factors applicable to such conditions. They were in downright earnest as to the necessity of arriving at the facts, and of acting upon deductions based upon them.

The debates were as warm—and sometimes as heated—as though politics or money were under consideration; then the president would invite the debaters to unite as well as they could, and a resolution to represent what was the most general view of what should be done was framed and sent in to the Government and other bodies seeking advice, or most competent to act on it.

Water Filtration.

Proceeding to Paris, I visited the newest water-filtration plant, and the sewage farms of Gennevilliers.

There are many filtration stations supplying Paris, and I went to that of Ivry. Here I presented my credentials of the University of Toronto and as delegate from the Provincial Board of Health of Ontario, and was treated with the greatest courtesy, the Engineer-Superintendent in charge, Dr. Régis Tartary, spending more than two hours conducting me over the plant and making explanations. The number of filter-beds is being more than doubled, and I was fortunate in arriving a few days before the new ones were put into use, thereby seeing their construction. They are abandoning the layers of gravel and broken brick and stone, thus saving space for an increased depth of sand, and this rests on a foundation of a porous cement laid to the thickness of an inch or a little more on a framework of a thick plate of iron or steel divided by ribs into squares apparently of 12 to 15 inches. The plate under the cement is perforated by numerous small holes and rests on strong rows of vitrified-brick (?) material, leaving run-ways for the filtered water between the iron plate and the cement bottom of the filter-tank. You will remember that in the early days of filtration on the large scale, frequent renewal of the top sand was recommended, and then the Massachusetts people, to whom we owe so much, promulgated the theory, since generally held, that the filter-bed did not attain a fair degree of efficiency until a gelatinous film had formed on its surface. M. Tartary smiled and said, "I used to believe that once, but one day a horse fell into the filter-bed, and floundered all over it. I do not believe that theory any more." And they now do not fear frequent scraping of the surface, and do not wait for the flow of water to be greatly lessened in quantity before removing the top. There was so much to hear and see that I did not ask him whether that incident was the only ground of his change of belief, but gathered that he had been taking observations before and after renewal. The water, after

running through a series of these tanks, passes into a small tank or passage-way divided by a wall into two compartments, from each of which is an outlet pipe, one which we shall call "A," leading to a reservoir for water sufficiently purified to be potable, and the other, which we shall call "B," not yet pure enough. By means of a sluice-valve in the partition wall the water may be allowed to flow in the direction of "A," or of "B," as desired. Which it shall be is determined daily by an analysis of the water as it enters the first compartment: by "A" it goes to a reservoir for distribution; by "B" to a reservoir from which it is again pumped on to the filter beds, to receive further purification. The circuit is so arranged as to give the water aeration, in addition to that obtained in the filter-beds themselves.

At this station of Ivry, where the Seine enters Paris, some of the water is pumped to a reservoir, without change, for fire, street-watering, and for factory purposes, whilst other portions are purified as above for domestic use and industries where a pure water is required. Dr. Tartary was pleased to find that I hailed from Toronto, as he holds in affectionate remembrance M. Marijon, of St. Michael's College, whose pupil he once was.

At the Sewage Farms of Gennevilliers

I had to rely largely on my own observations and information from workmen. I asked two or three questions of the chief men in the office—such as regarding outlay and return, the character of the effluent, etc.—but they were either not posted or careless and unwilling. This was at the so-called "Model Garden," under municipal oversight. Many gardeners throughout the extent of the plains are also recipients of the irrigating sewage. The sewage was about such as we see here, the modes of application such as are familiar to us in like establishments. The resulting effluent looked very good, and a workman in the Model Garden assured me it was *assez bon pour boire;* but for accurate data, or data officially accurate, I will write to the Hotel de Ville. I met another workman on the railway, who was an old resident and seemed intelligent and old enough to remember the former sandy plain, and intelligent enough to tell me of its conditions then and now. From his statements, added to my own observation of the now, I came to the conclusion that the reports so approbatory of the work are correct. The old man gave a dubious assent to the absence of insalubrious conditions; but on cross-questioning I found nothing to

contradict the generally received opinion that sewage-farms do not injure the health of the community. Another good piece of evidence is that the gardeners take the sewage and that they get good crops from what was once a desert. They receive the sewage in their gardens from hydrants similar to our fire hydrants, and it is distributed through the usual channels and sluices. The existence of some lazy-looking filter-beds in the "Jardin Model," seemed to me an indication that the sewage was sometimes *de trop*—a little more than they wanted for agricultural purposes.

THE UNIVERSITIES AND SANITARY INSTITUTES VISITED.

Those after leaving Spain and Portugal I can hardly more than enumerate: the University of Rome, and Sanitary Institute, at both of which I met Professor the Honorable Celli (of the House of Deputies) —the old Universities of Bologna and Padua I have already referred to; in the latter the old lecture and dissecting room of Morgagni, A.D. 1593; University of Genoa (*en passant*); of Lausanne, and Zurich, with goodly collections in the Museum of Hygiene in both; Red Cross, Naval and Field Hospitals and Sanitary Exhibits at the International Exposition at Milan; the Parkes' Museum in London, the laboratories of the Hygiene and Public Health Departments of the University and College of Surgeons, Edinburgh; and of the University of Glasgow—the latter beautifully situated; last, but not least, one nearer home, at McGill, through the kindness of Prof. Starkey, whom I must congratulate on the result of his struggle with difficulties, and with whom I can heartily sympathize.

Yours truly,

WM. OLDRIGHT.

Personals.

Dr. Edmund E. King returned to Toronto June 24th.

Dr. K. C. McIlwraith is spending two weeks at Stoney Lake.

Dr. Augusta Stowe-Gullen returned from New York last month.

The Toronto Western Hospital has opened a new emergency ward.

Dr. W. A. McAuley, of Copper Cliff, spent some time in Toronto last month.

Dr. Adam Wright arrived in Toronto, July 9th, after a two months' trip on the Continent.

Dr. John Malloch, of Toronto, has obtained the Fellowship of the Royal College of Surgeons.

Dr. Palmer was suddenly called home to Toronto on account of the severe illness of Mrs. Palmer.

Dr. H. C. Scadding returned to Toronto June 12th after spending four months on the Continent.

Dr. Frederick James Sheahan, Delhi, has been appointed an associate coroner for the County of Norfolk.

Dr. Bruce L. Riordan arrived home June 10th from a short trip to England, Scotland and Ireland.

Drs. H. A. Bruce and H. C. Parsons, of Toronto, spent the first ten days of this month at Georgian Bay.

Dr. W. J. McCollum, of Toronto, has returned home after an absence of seven weeks in London and Paris.

Dr. McNally, one of the house surgeons at the General Hospital for the past year, has gone to St. Paul, Minn.

Drs. Blake (Trin. '02) and Irwin (Tor. '02) have returned home after doing four months' post-graduate work in London.

Dr. A. E. Schultz, of the village of Elmira, has been appointed Assoicate Coroner for the County of Waterloo.

Dr. F. A. Cleland (Tor. '01), who has been practicing in New York for the past two years, spent last month in Winnipeg.

Dr. N. Amyot (Tor. '95), Belle River, is doing post-graduate work in medicine at Johns Hopkins Hospital, Baltimore, Md.

Dr. W. H. B. Aikins, after attending the Fifteenth International Medical Congress at Lisbon, and spending some time in Vienna, returned to Toronto June 27th.

Drs. J. H. Mullin, Hamilton, John McCrae, Montreal, and W. F. Maybury, Ottawa, spent a few days in Toronto last month.

Dr. W. W. Jones (Tor. '96), after spending some years in London, during which time he obtained his F.R.C.S., has commenced practice at 92 College Street, Toronto.

The following have been selected as internes for the next year at the Toronto General Hospital: W. F. Lemon, Aylmer; J. A. Kinnear, Toronto; G. S. Strathy, Toronto; F. J. Munn, Toronto; C. E. Spence, Toronto, A. G. Wallace, Humber, Ontario.

The local committee of the Dermatological Section of the British Medical Association desires any doctor who has any interesting case of skin disease to communicate with the Secretary, Dr. D. King Smith, 311 Jarvis Street, as arrangements for presentation of cases at the clinic will be made by the committee.

Dr. Helen MacMurchy, of Toronto, has been commissioned of the Ontario Government to take a census of the feeble-minded people of the Province who are not confined in asylums and houses of refuge. Her work will refer chiefly to women, and the data will be obtained in order to aid the Government in deciding on some course of action.

Births.

Amys—At 270 Charlotte Street, Peterborough, on June 14th, 1906, to Dr. Amys and Mrs. Amys, a daughter.

McCulloch—At Grace Hospital, to Dr. and Mrs. E. A. McCulloch, a daughter.

Keith—On Saturday, June 9th, 1906, at Omemee, Ont., to Dr. and Mrs. J. Paterson Keith, a son.

Softley—On Sunday, June 17th, 1906, at Claude, Ont., the wife of Dr. Softley, of a son.

Marriages.

GIBSON—BELL—On Wednesday, June 6th, by the Rev. Dr. McTavish, Agnes E. Rathbun, daughter of the late John Bell, to D. M. J. Gibson, M.D., of Belleville.

REIVE—MICHELL—On Wednesday, June 6th, at the residence of the bride's aunt, Mrs. E. Burk, Markham, Bessie Michell, daughter of Mrs. T. Michell, to Wilfred Gilmour Reive, M.B., of Arthur.

JOHNSTON—METCALF—At "Swallowbeck," Grimsby, June 6th, 1906, by the Rev. J. A. Ballard, Ethel Mary, second daughter of the late Dr. W. G. Metcalf, to Hugh R. Johnston, of Toronto.

MILLAR—MCKIM—On Wednesday, June 6th, 1906, by Rev. R. J. Treleavan, of Hamilton, at 76 Close Ave., Toronto, Marcella Ruth (Betty), daughter of the late Sheriff McKim, of Guelph, to Dr. Stanley Millar, of Battleford, Sask.

WILY—BRIDGLAND—At St. Thomas' Church, Bracebridge, by the Rev. W. A. J. Burt, Beatrice, daughter of the late Samuel Bridgland, M.D., to Walter Wily, son of Arthur Wily, of Toronto.

DIXON—BROUGH—At the home of the bride's mother, 295 Seaton Street, on Tuesday evening, June 12th, 1906, by the Rev. S. W. L. Harton, William Dixon, M.D., of Wetaskiwin, Alberta, to Margaret Maude Brough (of the Ontario Department of Agriculture), daughter of the late William Brough.

MCGILLIVRAY—NELSON—On June 14th, 1906, at St. Paul's Church, by the Rev. Canon Cody, Helen, daughter of Mrs. Horatio W. Nelson, to Donald McGillivray, M.D., both of Toronto.

ANDERSON—BELL—At Atlantic City, New Jersey, June 16th, 1906, by the Rev. Newton N. Caldwell, D.D., Gertrude Aminta Bell, of Washington, D.C., to Dr. Duncan Anderson, Toronto.

Book Reviews.

A Treatise on Surgery. In two volumes. By GEORGE R. FOWLER, M.D., Examiner in Surgery, Board of Medical Examiners of the Regents of the University of the State of New York ; Emeritus Professor of Surgery in the New York Polyclinic, etc. Two imperial octavos of 725 pages each, with 888 text illustrations and 4 colored plates, all original. Philadelphia and London : W. B. Saunders Company, 1906. Per set : Cloth, $15.00 net ; half morocco, $17.00 net. Canadian agents : J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto, Ont.

The first volume of Dr. Fowler's "Treatise on Surgery" has just appeared, and is an accurate, up-to-date book skilfully presented by a man skilled in the art of practical surgery. This part of the work deals with general surgery, and embraces what is usually included under the head of principles of surgery. Special attention is given to the subject of inflammation from the surgeon's point of view, due consideration being accorded the influences of traumatism and bacterial infection as the predisposing and exciting causes of this condition. Then follow sections on the injuries and diseases of separate tissues, gunshot injuries, acute wound diseases, chronic surgical infections (including syphilis), tumors, surgical operations in general, foreign bodies, and bandaging. The text is well illustrated with entirely new and original illustrations.

A Text-Book of Materia Medica, Therapeutics and Pharmacology. By GEORGE F. BUTLER, PH.G., M.D., Associate Professor of Therapeutics in the College of Physicians and Surgeons, Chicago. Fifth Edition, thoroughly revised by SMITH ELY JELLIFFE, M.D., Ph.D., Professor of Pharmacognosy and Instructor in Materia Medica and Therapeutics in Columbia University (College of Physicians and Surgeons), New York. Octavo of 694 pages, illustrated. Philadelphia and London : W. B. Saunders Company, 1906. Cloth, $4.00 net ; half morocco, $5.00 net. Canadian agents : J. A. Carveth & Co., Limited, 434 Yonge Street, Toronto.

For this fifth edition Dr. Butler's text-book has been entirely remodelled, rewritten, and reset, bringing it in accord with the new (1905) Pharmacopeia. All obsolete matter has been eliminated, and special attention has been given to the toxicologic and therapeutic effects of the newer compounds. The general arrangement of the book has been so changed that those drugs the predominant action of which is on one system of organs of the body are grouped together, thus suggesting their therapeutic as well as their pharmacologic alliances. We believe this classification to be more thoroughly practical and useful than any other. By use of a more compact type the work has been reduced in size. It is with pleasure that we commend this book to the profession, for it is most thorough, and is one of the best on the subjects it includes.

Reference Hand-Book on the Diseases of Children. By Dr. Ferdinand Fruhwald, Chief of Clinic in the Vienna Polyclinic. Philadelphia and London: W. B. Saunders; Toronto: J. A. Carveth & Co.

This work has been translated and edited, with additions, by Dr. T. S. Westcott, Associate in Diseases of Children in the University of Pennsylvania, so as to make more easily available the results of the great and unusual experience in this department of medicine possessed by Prof. Frühwald. It may be said at the outset that the work is strictly what it is named, a reference hand-book. It is an epitome of present knowledge, not a systematic treatise. Everything has been done (alphabetical arrangement, cross-references, illustrations, etc.) to facilitate rapid reference and practical use. As such it is valuable, but it does not take the place of a standard text-book. One of the most satisfactory articles is that on measles, while, on the contrary, that on hemophilia seems somewhat inadequate.

There are numerous illustrations, some from photographs, others of a diagrammatic character.

On the whole, the book is a useful addition to any medical library.

On Common Ground. By Sydney H. Preston. New York: Henry Holt & Co. Toronto: The Copp, Clark Co.

If any gentleman wants a book to read on the happy day when he shakes the dust off his feet and departs for the doctor's brief holiday, here it is. Moreover, if any British gentleman (or lady) wants advice as to a Canadian book to buy and read while he sits in a Pullman and goes a few thousand miles over the country, east, west, north, or south, tell him to go into our own Tyrrell's and buy this book. Blessed be the Canadian Humorist! What should we do without him? He sometimes raises his head from the newspaper desk and says things to us, things that delight and sweeten the mind. Humor is a great antiseptic. We are not going to say any more about the book, except that its author lives on his own good little farm within sixteen miles of where the *Canadian Practitioner* is published, and that he was strictly made in Canada. Moreover, he has done what hardly any other novelist has done—he has made his medical local color correct. Listen to this—it is the medical history of Joseph, the "hired man," as given by himself. "It began with water-in-the-eye, of course, and when the doctor examined his eyes he looked exceedingly grave and said it was not

water-in-the-eye at all, but a bad case of a-stick-my-tism, which frightened Joseph out of his boots ; then he opened a number of drawers, containing gleaming instruments and spectacles and glass eyes, studied them thoughtfully, and told his patient to come back at two o'clock and he'd attend to him. And Joseph, weak with apprehension, escaped, and feeling faint, dropped into a saloon for a glass of beer ; and meeting there a friendly and loquacious person, he learned that in cases of a-stick-my-tism the doctor replaced your eyes with a glass pair while he soaked the old ones in whiskey for a month to clear the sight. And the learned acquaintance solemnly adjured him to soak his own and save the expense by getting on a drunk, which he accordingly did, with deplorable results in some ways, he admitted, but with complete success in regard to the painful malady."

The Peters Self-Registering Electric Target. By Lieut.-Col. George A. Peters, 9th Toronto Light Horse. Toronto: William Tyrrell.

Dr. Peters has printed for private circulation the paper read by him before the Canadian Military Institute on April 26, 1904. It has been revised and illustrated to show development to date (March 1, 1906), and forms an attractive little book, the illustrations and typography of which reflect credit on the publishers. In regard to the value of the target, and the skill and ingenuity of the distinguished author, all the military men we have had access to have but one opinion, and we congratulate Lieut.-Col. Peters, and express the hope that he will reap the laurels he has well deserved and something more substantial as well.

Obituary.

DR. MARY PUTNAM JACOBI.

Dr. Mary Putnam Jacobi, of New York, a distinguished woman and physician, the daughter of George P. Putnam (founder of the great publishing house still bearing his name), and the wife of Dr. Abraham Jacobi, died on Sunday morning, June 10th, at her home, No. 19 East 47th Street, New York City. A great change has come over the medical world since she graduated in 1864 at the Woman's Medical College in Philadelphia. Had she not chosen a medical career (to the surprise of her father and friends) she would still, doubtless, have had a literary career. She had an article accepted by *The Atlantic Monthly* when she was sixteen years old, a distinction that falls to few, and she was the author of several books. She was born in London, England, in 1842, came to New York with her family in 1847, began the study of medicine when she was twenty years of age, and after graduation held a resident appointment in the New England Hospital for Women and Children, Boston, 1866-1871. She was the first woman to be admitted to the Ecole de Médicine in Paris, and also the first woman admitted as a Fellow to the New York Academy of Medicine. She was married in 1873. Dr. Mary Jacobi took a great interest in public affairs, and carried on a large hospital and private practice, devoting much attention to children's diseases and nervous diseases.

DR. J. W. DIGBY.

The death occurred very suddenly, on May 29th, of Dr. J. W. Digby, the most prominent physician in Brantford, and one of the best known residents of western Ontario. Deceased was born in Brantford in 1842. He was educated at Dr. Tassie's School in Galt, matriculated at Toronto University and graduated at McGill in 1862.

During the American rebellion he received the appointment of acting assistant surgeon, and was stationed at the hospital at Point Lookout, Md. After the Battle of Stone River, he participated in the campaign through the western State as hospital surgeon until the Battle of Chickamauga, when he was stationed in the field hospital at Chattanooga in charge of several wards. Later he received the appointment of regimental surgeon of the 16th U.S. Infantry, and with that regiment took part in the campaign through the South. He returned to Brantford in 1866. Dr. Digby was President of the Royal Loan Company of that city, Vice-President of the Farmers' Binder Twine, Vice-President of the hospital, a director of the Toronto General Trusts, surgeon of the G.T.R. He was three times mayor of that city and had held nearly every position in the gift of the citizens.

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Original Communications.

GASTROPTOSIS.

BY GRAHAM CHAMBERS, B.A., M.B., TORONTO.
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Gastroptosis is a term applied to downward displacement of the stomach. It is usually accompanied by ptoses of other abdominal organs, especially the right kidney.

Kussmaul was the first to call attention to some displacements of the stomach and their connection with clinical symptoms. However, it was Glenard's researches on enteroptosis which drew general attention to the frequent occurrence of downward displacements of abdominal organs and to their relation to symptoms of disease. On this account Glenard has been given the credit of priority, and dropping of abdominal organs in general is frequently designated Glenard's disease; and inasmuch as gastroptosis is generally accompanied by downward displacement of other abdominal organs they are sometimes considered together under the caption enteroptosis.

With regard to the nomenclature of the various ptoses of the abdominal viscera it is customary, following Glenard, to use the term enteroptosis to designate prolapse of the abdominal organs in general. Strictly speaking this is not correct, as, etymologically, enteroptosis means falling of the intestines. A better term for the general prolapse is splanchnoptosis. If we adopt this term we can use the term enteroptosis for downward displacement of the intestines, just as gastroptosis, hepatoptosis, splenoptosis, are used respectively for dropping of the stomach, kidney, liver and spleen.

In cases of gastroptosis it is rare to see displacement of

the cardia. The latter may be said to be the only point of the stomach which is not freely movable. The pylorus is usually displaced downwards, occasionally below the navel. The lesser and greater curvatures are always lower than normal in the abdomen. However, the different parts of the stomach are not uniformly displaced, which character, together with the fact that gastroptosis is frequently complicated by gastrectasis, gives rise to a variety of forms and positions of the stomach.

The form and position of the stomach are determined principally by the locations of the pylorus and lesser curvature. These parts are frequently displaced downwards, the concavity of the lesser curvature becoming less and directed more to the right. In some cases the pylorus is prolapsed to the extent of producing an almost vertical position of the lesser curvature. Then the stomach assumes a position similar to that which is present at birth. Again there are cases in which the curvatures are prolapsed out of proportion to the pylorus. As a result the concavity of the lesser curvature is increased and kinking of the duodenum is more apt to occur. This type of displacement, sometimes called loop or crescent, is usually only observed in women with much relaxation of the abdominal muscles.

Etiology.—Gastroptosis is a very common phenomenon. It occurs in both sexes, but probably three times as frequently in women as in men. It is particularly common in women who have borne children.

In order to gain a good idea of the genesis of gastroptosis it is well to recall to mind the normal position and natural supports of the stomach.

The stomach is situated in the epigastric and left hypochondriac regions immediately under and in contact with the left lobe of the liver and left dome of the diaphragm. It is held in position by the esophagus, ligaments, and by a cushion of intestines and mesenteries situated beneath it which is itself supported by intestinal ligaments and attachments, and intra-abdominal tension produced by the tonicity of the muscles of the abdominal wall and pelvic floor. The tone and strength of these muscles and ligaments which take part in supporting the stomach may be said to depend upon three conditions, namely, hereditary influence, exercise and health. Again, the positions of the liver and diaphragm are to be considered, as they are situated immediately above the stomach and therefore when displaced downwards must necessarily cause some degree of sinking of the stomach.

A consideration of all these matters aids us in determining the causes of gastroptosis. These are as follows:

1. Hereditary weakness and defective development of the gastric ligaments and abdominal muscles. These I believe to be common causes. I have frequently seen gastroptosis in young people, especially girls, in whom no other cause could be made out. I have an impression that hereditary weakness is a much more potent etiological factor than it is generally credited to be. Some persons are born with delicate muscles and ligaments, and are therefore predisposed to gastroptosis. I believe that even in many cases of gastroptosis following pregnancy hereditary weakness is an important etiological factor. Stiller gave much prominence to hereditary influences in the etiology of gastroptosis. He thought that a movable tenth rib was a very common accompaniment. This has not been the case in many observations.

2. Diminished abdominal tension. This is usually the result of relaxation of the abdominal muscles after parturition. It occasionally follows rapid emaciation, removal of ascitic fluid and of ovarian cyst. Diminished abdominal tension is also observed in young adults in whom deficient exercise and hereditary weakness appear to be the causative factors.

3. Constriction of the lower part of the thorax. Tight lacing and the wearing of skirts suspended from the waistband are the usual causes of this deformity. The contracted waist of gastroptosis is about the level of the ensiform cartilage.

4. Deformities of thorax. In flat chest, frequently seen in persons predisposed to tuberculosis, the diaphragm is usually displaced downwards. This, together with the delicacy and weakness of tissue of persons with this form of thorax, tends to produce downward displacement of the stomach.

5. Excessive eating, particularly during convalescence of infections such as typhoid fever and influenza, is sometimes the cause of gastroptosis as well as of gastrectasis.

Symptoms.—The onset of gastroptosis may be insidious or sudden. All the cases of sudden onset which I have observed have followed parturition. Some persons with downward displacement of the stomach, movable kidney, and flabby abdomen have no complaints except, probably, constipation. On the other hand, others are emaciated, weak, continually complaining of indigestion and of a great variety of nervous symptoms. In the diagnosis, therefore, of the disease we

depend upon the objective symptoms, and of these prolapse of the stomach is the only distinctive sign. We should, however, be familiar with all the symptoms, objective and subjective, as well as the functional signs which characterized the disease. The objective symptoms are:

1. Emaciation. This is a very common and important symptom. Indeed, it is so common that when an emaciated patient with indigestion and nervous disturbance consults me I always think of gastroptosis as a possible cause of the complaints.

2. Diminished tension of abdominal muscles. This is not a constant sign, as gastroptosis occurs with no relaxation of abdominal muscles. In cases following pregnancy a flabby abdomen is invariably present.

3. Depressed epigastrium and pulsating abdominal aorta. In patients in whom there is much emaciation the head of the pancreas may occasionally be palpated.

4. Movable kidney, usually the right.

5. Splashing sound below the normal lower limit of the stomach.

6. Prolapse of the stomach. This is the only constant physical sign. Both the lesser and greater curvature are displaced downwards. In some cases the stomach may be seen moving up and down in the abdomen during deep respiration. In many cases it is necessary to distend the stomach with air or carbon dioxide in order to determine the positions.

7. Visible peristalsis. Pyloric obstruction due to duodenal kinking is the usual cause of this phenomenon in gastroptosis. The loop or crescent type of displacement is generally present.

8. Downward displacement of the liver and spleen. These are uncommon, particularly of the spleen.

9. Prolapse of the uterus. In gastroptosis this displacement is invariably associated with diminished abdominal tension.

The functional signs of gastroptosis may with advantage be next considered. All the functions, motor and secretory and sensory, are frequently perverted.

The gastric motility is usually more or less diminished. In some cases this is so slight as not to give rise to symptoms of indigestion. In others it may be so marked as to produce stagnation of food, with resulting fermentation and gastric irritation. This motor insufficiency may be due either to the anomalous posture of the stomach, requiring greater peristalsis for the propulsion of the chyme into the duodenum or

to obstruction, the result of duodenal kinking. It may also be due to gastrectasis, with weakness of the gastric muscles, a common accompaniment of gastroptosis.

Hyperchloric acidity may be normal, increased or decreased. Hyperacidity is present in the majority of cases. It is the usual finding in women with relaxed abdominal muscles. The excessive hydrochloric acid may be due to the irritation of the stagnating food, and the nervous disturbances which are so frequently present in cases of gastroptosis, as well as to the causes of the disease called hyperchlorhydria.

The sensory function of the stomach is generally increased. This is shown by the frequency of hyperesthesia of the gastric mucosa, a cause of a good deal of the distress in some cases of gastroptosis.

As stated above, the subjective symptoms are very variable. The usual complaints are gastro-intestinal and nervous. The appetite is generally good, though the patient is afraid to eat lest it cause distress. Constipation is common, and pain and a sensation of fulness in the epigastrium after eating are frequently present, particularly in cases complicated by hyperchlorhydria. In some cases the pain appears one to three hours after ingestion of food, and is partly or wholly relieved by eating or by taking baking soda. This type of pain is usually caused by excessive hydrochloric acid in the gastric contents, and is usually associated with other symptoms of hyperchlorhydria, such as pyrosis, headache, drowsiness, sluggishness after eating, etc.

In cases of gastroptosis in which there is motor insufficiency belching is a common symptom. This is usually due to fermentation, the result of stagnation of food. In some cases, however, the eructations are principally of neurotic origin. Rumbling in the abdomen, particularly on the left side, is another common and very annoying symptom. It is generally observed in patients with a flabby abdomen, and is precipitated by deep breathing or by excitement. It only occurs during gastric digestion, and is generally intensified by the wearing of corsets. This last character has led some to suggest that the rumbling sounds are stenotic in origin.

The nervous symptoms of gastroptosis are very similar to those of neurasthenia. Patients frequently complain of sleeplessness, irritability, inability to do mental work, headache, backache, palpitation, coldness of the extremities and of many other symptoms which characterize neurasthenia. In persons predisposed to neuroses hysterical symptoms may supervene.

Diagnosis.—Gastroptosis, as a rule, may be said to be a composite disease, as the displacement of the stomach is usually accompanied by some other organic or functional gastric disturbance. The diagnosis of the displacement itself is easy. The condition is suggested by loss of weight, weakness, indigestion, neurasthenic complaints, relaxation of abdominal muscles, and ptoses of other abdominal viscera, and is definitely determined by observing the position of the lesser curvature lower than normally in the abdomen. Having determined the presence of the displacement we should examine the patient with the object of determining the presence or absence of gastric affections, which are frequently associated with gastroptosis, such as perversions of gastric functions and gastrectasis. We should also remember that the stomach in its displacement is liable to the same diseases as it is in the normal position. We must, therefore, determine the presence or absence of all organic and functional diseases of the stomach before our knowledge is sufficiently complete to formulate a method of treatment.

Treatment.—The treatment of gastroptosis is one of the most successful in gastrotherapy. Correct treatment produces almost immediate improvement in the condition of the patient, but it must be continued for a considerable time in order to produce a cure. The following are the most important therapeutic indications:

1. To replace the stomach and to support it by an abdominal band, applied to the lower abdomen.
2. To increase abdominal tension and strengthen the natural supports of the stomach.
3. To increase the capacity of the upper abdomen.
4. To correct perversions of the secretory, motor and sensory functions.
5. To regulate the bowels.
6. To improve the general condition of the patient and particularly the tone and strength of the nervous system.

The replacement of the stomach in its normal position is the most important indication in treatment. In many cases, as soon as the stomach is in its normal position, there is an immediate improvement in the condition of the digestion and of the nervous system. The gastric functions become normal and the patient quickly gains in weight. With the increase of weight there is a deposit of fat in the abdomen, which raises the abdominal tension and tends to prevent prolapse of the stomach. The increase in weight is usually accom-

panied by an improvement in the condition of the nervous system and in the tone of the gastric ligaments and abdominal muscles. The question is, How may the stomach be raised? In cases in which the abdomen is flabby, any well-fitting abdominal band, applied between the navel and the pubes is usually sufficient. It should be applied while the patient is in the recumbent position, the stomach being first forced up into the epigastrium. In place of a band I frequently use strips of adhesive plaster applied horizontally as well as diagonally across the lower abdomen. Physical exercise and massage are also of much value in improving the tone of the muscles of the abdominal wall, particularly of the recti. The best method of giving exercise to these muscles is while lying down to bend the trunk upon the thighs, rising from the recumbent to the sitting posture. While performing these movements the feet should be placed under some fixed structure. Another movement very useful in strengthening the recti is, while lying on the back, to raise the legs from the horizontal to the vertical position. Massage is also an important therapeutic measure. I have found it most effective in cases with marked neurasthenic symptoms.

With the object of increasing the capacity of the upper abdomen the patient should be instructed to practice deep breathing. Deep breathing not only tends to expand the upper part of the abdomen but also to improve the tone of the gastric ligaments and abdominal muscles. Tight lacing and the wearing of heavy skirts suspended from the waist-band are antagonistic to the expansion and should be prohibited.

In the correction of perversions of functions, after replacing the stomach, we adopt the same methods as we do in the treatment of these disturbances as independent affections. Thus, in cases characterized by hyperacidity, we give antacids after food and a soothing, easily digested diet. When motor insufficiency is a symptom strychnine is useful, and the diet should be soothing, easily digested and propelled into the duodenum.

The improvement of the general condition of the patient frequently requires other measures than those directed to correct digestive disturbances. The nervous system in particular requires special attention. Many patients with gastroptosis suffer from neurasthenia. In the treatment, therefore, of gastroptosis with neurasthenia we institute measures for the relief of both affections. The improvement in digestion and the removal of all irritation in the digestive tract always

aids in relieving nervous symptoms. Sleep is improved, and the patient is less depressed and has greater application for mental work. In some cases the rest cure gives excellent results. It is the rest cure, with the ingestion of large quantities of milk and other foods, which is indicated. In following out the treatment particular attention is to be directed to the weight of the patient. An increase in weight not only indicates an improvement in the condition, but also, by increasing abdominal tension, becomes itself a therapeutic factor.

Selected Article.

THE HIGH RANGE OF NORMAL TEMPERATURE AND PULSE THROUGHOUT THE PUERPERIUM.

By E. HASTINGS TWEEDY, F.R.C.P.I.,
Master, Rotunda Hospital, Dublin.

Amongst the many myths of our profession there is none more common than the belief that puerperal sepsis has long since ceased to be a scourge, and this is the belief generally entertained by practitioners concerning their own districts. One cannot peruse current periodicals even for a short time without the prevalence of this idea becoming apparent. There appears to be an almost universal assumption that this black scourge of the past has ceased to be a terror to the lying-in women because of increased knowledge and greater precision in obstetrical technique.

A reference to the Registrar-General's reports, however, shows little, if any, improvement in the death-rate from sepsis. This is flippantly accounted for by the assumption of a higher diagnostic skill among the younger race of practitioners as compared with those who went before them, and by the increased carefulness which is now displayed in furnishing statistical figures. Have we not all long since been satiated by the assertions of our friends as to the immunity from sepsis enjoyed by their patients? and are they not ever ready to refer us to longer or shorter periods in which no record of such a cause of death can be found in their practice?

It is known to us all that many fatalities from sepsis are not registered as such. We are also aware that memory often fails to recall disasters of a distant past, and that statistical results quoted from memory are the most fallacious of fallacious figures. Even were we disposed to ignore these sources of error, and accept without reservation these honest beliefs, they would nevertheless utterly fail as proof of the non-existence of septic infection.

Success in obstetrical practice, as it exists in the larger maternity hospitals, or in the district of the private practitioner, is more accurately gauged by a low percentage of morbid cases than by any table of septic mortality.

We need constantly to be reminded nowadays that septic deaths did not occur as a rule in the private practice of obstetric physicians living in the pre-antiseptic era to an extent sufficient to excite local alarm. Then, as now, men practiced midwifery for long periods with an entire freedom from septic mortality, and these periods of immunity extended also to the maternity hospitals.

It will probably come as a surprise to some that, in the year 1766, 611 women were delivered within the walls of the Rotunda Hospital, with a maternal mortality from all causes of three, nor is this seen to be a very exceptional year, for a low death-rate is also recorded during many other yearly periods. In fact, a perusal of the old records makes one at first rub one's eyes with astonishment at the comparatively good results obtained.

It is not until we compare figures by the thousand that the superiority of the present-day methods asserts itself, and this superiority is seen to be overwhelming if our judgment be not based on a death standard alone.

It rarely falls to the lot of the private practitioner to be able accurately to tabulate his cases by thousands, and therefore, from a statistical standpoint, individual experience expressed by a mortality-rate is for the most part of little value. In a standard of morbidity, however, we possess a ready and certain means for determining success either in private or hospital practice, whether the number of those attended be few or many.

In the early history of the Rotunda Hospital about the period before alluded to (1766 to 1780), maternity patients slept two in each bed. They lay on tick bedding, in a condition none too clean. The water supply to the hospital was provided by means of a pump drawing a well which must almost certainly have been contaminated. In the report from which I have obtained this information, the Master seeks permission from the Governors of the hospital to employ two men to clean out the hospital cesspool, which had become a grievous nuisance to his patients and to the neighborhood. In spite of all these disadvantages the total yearly death-rate frequently stood at seven with a total of 800 or 900, or even at a lower figure.

If figures such as these prove anything, they prove that the majority of women will survive the processes of childbirth under the most disadvantageous circumstances. If, however, there should be neglect in carrying out the well-recognized

principles of asepsis, a small minority alone will pass through this ordeal unscathed.

In proof of the latter statement I adduce the temperature records of the Rotunda Hospital for a portion of two months in the years 1879 and 1880. These charts, which have fortunately been preserved, contain the temperatures registered of ninety-nine patients, and a reference to the ward books of the same periods proves conclusively that the hospital was in a more than usually healthy condition at this time. Carbolic acid and Condy's fluid were in general use, and the hygienic state of the institution had markedly improved, and yet an analysis of these ninety-nine records cannot fail to surprise us.

Forty-eight out of these ninety-nine charts record a morbid state of temperature; of these, nine reached up to or above 105 deg. F., eighteen more were up to 103 deg. F., whilst in only five instances is the range of temperature up to but not above 101 deg. F. Moreover, in reading the notes of the apparently normal cases, one is compelled to suspect that the temperature did not accurately express the true condition of affairs. I find the following notes appended to no less than ten of these, all occurring in one of the two bound books containing forty-nine and fifty charts respectively:

1. Chill, pain in abdomen.
2. Chill, erysipelatous patch over buttocks.
3. Succession of chills, headache.
4. Great pain in abdomen.
5. Great pain in abdomen, also down legs.
6. Chill.
7. Chill.
8. Feeling very weak and faint when sitting up.
9. Chills, lochia fetid and scanty.
10. Series of chills, face flushed, lochia very fetid and scanty.

Results such as these compare badly with our present-day statistics, which show for the six months ending April 20th, 1905, that amongst 918 women delivered in the wards of the hospital, there were 58 cases recorded as morbid, a percentage of 6.31.

An analysis of these 58 cases will show that our results are still more favorable than the bald statement of the figures would lead one to believe. In 48 instances the temperature and pulse did not remain above the normal for longer than four days, and of the remaining 10, morbidity in 5 cases did

not exceed five days' duration. In the other 5 the morbid state persisted for twenty-one, sixteen, eleven, eleven, and eight days respectively. Until private practitioners can produce results as good, if not better, than these, they may be perfectly certain that their technique lacks perfection.

It is necessary to add that none of these cases gave rise to serious anxiety, and all save two had normal records of temperature and pulse for thirty-six hours before leaving the hospital.

It may possibly be argued that an apyrexial puerperium is neither normal nor to be desired, and that a temperature elevated within reasonable limits exercises no injurious influences.

We all know that numberless women have passed through the ordeal of sepsis with constitutions irrevocably shattered, and important organs hopelessly damaged or destroyed. It is, moreover, probable that vital forces are never fully restored to those who have suffered from a septic disease, even in a mild form, and none can doubt that the exhausting influences of childbearing are due to a septic dyscrasia rather than to the exercise of a normal function.

The question now arises, What are the physical indications of puerperal morbidity? and the answer, strange to say, is one on which there is at present no definite agreement.

Some years ago it was considered that slight pyrexia should be looked on as due to physiological processes, and to mark its high limit an arbitrary line was placed at a temperature of 100.4 deg. F. by Continental authorities. In the Rotunda Hospital this arbitrary line has until lately been fixed at 100.8 deg. F. Modern authorities, however, have nearly all arrived at the opinion that the processes of childbearing have none but the most transitory effects in elevating temperature above that which is considered normal in health. Our maternity charts clearly demonstrate the truth of this belief, and, moreover, show the fallacy of estimating morbidity by any arbitrary range of temperature when taken without consideration of another important factor—the pulse.

I cannot too strongly urge on my professional brethren the importance of arriving at some common basis for determining morbidity other than that of this most unsatisfactory temperature limit. I trust that this subject will be seriously taken in hand by those members of our Association interested in the subject, and I for one will gladly co-operate with the heads of other maternity hospitals in an effort to establish a common standard on which to base our returns of morbidity. Only in

this way can we gain a clear insight into the efficiency of our methods, for the adoption of a common standard would enable us to compare our results with other statistics compiled on a similar basis.

It is only by being armed with such precise data that we will be enabled with force to urge the adoption in practice of the means which procure the smallest percentage of morbidity.

There are many objections to be urged against the arbitrary limit to a temperature of 100.4 deg. F. It is an unsatisfactory indication of the well-being of the lying-in woman. Were such a temperature maintained for even a few consecutive days the woman would certainly be in an abnormal condition. Again, it is unsatisfactory because of the fact that it takes no account of the sudden and transitory rises of temperature which may easily extend beyond this limit without adversely affecting the patient, and without being even remotely allied to septic absorption as we understand the term. It is an unreliable indication in that it depends entirely upon the accuracy of a clinical thermometer, and those of us who know how frequently these instruments are at fault can appreciate the uncertainty of statistics relying on such a basis alone.

A morbid state, if of septic origin, will most certainly show itself by an acceleration of the pulse as well as by a rise of temperature, and it is upon the knowledge of this fact that our present method of estimating morbidity in the Rotunda Hospital is based.

Our bed charts are arranged so as to make these two records apparent at a passing glance. The high range of normal temperature is placed at 99 deg. F., that of the pulse at 90 beats per minute. It is certain that even a mild condition of septic absorption will prove sufficiently potent to cause these limits to be overstepped, and will at once put us on our guard, and enable us to take prompt means to deal with the abnormal condition.

The pulse chart acts, too, as a ready corrective of faults of the thermometer, and the two taken together greatly aid us in detecting mistakes in either.

In order to eliminate the sudden and unimportant exacerbations of temperature from our morbidity list, we do not enter in our records as morbid any case where morning and evening pulse and temperature are not recorded as abnormal on three consecutive occasions, or, to put it in other words, until the abnormal condition has made itself apparent for twenty-four hours. Furthermore, we do not take into account

the irregularities of pulse or temperature so frequently observed within twenty-four hours of the period following delivery.

It is conceivable that a hectic temperature might be present without fulfilling these conditions, but such an eventuality need not be seriously considered.

We have sufficient proof in the Rotunda Hospital that the method I have indicated works with smoothness and absolute simplicity. It enables one to notice at once the true condition of the patient, and it directs the attention to deviations from the normal where a definition of morbidity based on temperature alone would at times fail to ensure the early recognition of the patient's state.

The above paper was presented in the Section of Obstetrics and Gynecology at the annual meeting of the British Medical Association at Leicester, in 1905 (see *British Medical Journal.*) In consequence, a committee was appointed on puerperal morbidity. The committee has collected a great amount of valuable information, and has prepared the following report:

"*Resolved,*—That it is desirable that maternity hospitals should adopt a uniform standard of puerperal morbidity, so that doubtful cases should no longer be included in one set of statistics and excluded from another, as is the case at present. A criterion of morbidity, necessarily arbitrary, is therefore recommended in the hope that it may be adopted in British and colonial hospitals.

"*Recommendations.*—The committee accordingly beg to submit the recommendations embodied in the following six resolutions:

"1. That irregularities in temperature occurring during the twenty-four hours following delivery should not be considered for statistical purposes.

"2. That as the time puerperal patients remain in hospital varies in different institutions, statistical tables should be formed from the records up to the end of the eighth day after delivery.

"3. That statistical records should relate only to patients delivered after the sixth lunar month of pregnancy.*

"4. That records of pulse and temperature should be taken

* It is recommended that cases delivered before the end of the sixth lunar month of pregnancy should be tabulated separately.

twice a day in every case, the following precautions being observed:

"(*a*) The temperature to be taken night and morning—if possible between the hours of 7 and 9 a.m. for the morning, and between the hours of 5 and 7 p.m. for the evening record.

"(*b*) The temperature to be taken in the mouth.

"(*c*) The thermometer to be left in the mouth for four minutes.

"5. That the table of puerperal morbidity should include all fatal cases, and also all cases in which the temperature reaches 100 deg. F. on any two of the bi-daily readings from the end of the first to the end of the eighth day after delivery.†

"6. That all cases which according to this convention are 'morbid' should be tabulated in statistics, the probable cause of the illness and its duration in days being given."

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† Dr. Tweedy urged that the table should, in addition, include all cases where on three consecutive bi-daily readings the pulse-rate exceeded 90 per minute and the temperature 99° F., but the majority of the Committee were of opinion that the introduction of a double standard was not advisable at present.

Progress of Medical Science.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SLUTTLEWORTH AND F. W. MARLOW.

Syphilis and Enlarged Glands.

A good many years ago Virchow pointed out that smooth atrophy of the lymphoid masses, normally present at the base of the tongue, took place in cases of late syphilis. This symptom has since been further investigated without any definite conclusions.

The recognition of syphilis may, at times, be exceedingly difficult, especially when the primary lesion has been overlooked, and the secondary symptoms slight or not recognized until perhaps some obscure tertiary lesion occurs, and from a therapeutical standpoint makes the diagnosis of antecedent specific disease all important.

The recognition of any symptom which will aid in diagnosis will be appreciated by the clinician.

Dr. N. B. Potter (*Boston Med. and Surg. Jour.*, March 8th, 1906) made a study of three hundred cases of various kinds to ascertain whether the atrophy of the glands at the base of the tongue was constantly found in syphilis. He found the symptom present in about 50 per cent. of syphilitic patients, and only in 10 per cent. in cases without a syphilitic taint.

The tongue is protruded as far as possible, and the organ is wrapped in a towel and grasped by the left hand of the observer. The right index finger is then introduced to the region behind the circumvallate papilæ and the area carefully palpated. If the glands are normal, syphilis is probaby to be excluded, while typical atrophy is indicative of syphilis. A moderate degree of atrophy is, however, of little diagnostic importance. C. B. S.

Cancer of the Tongue.

In the *Brit. Med. Jour.* of May 26th, 1906, Mr. Henry T. Butlin contributes an article on very early conditions of cancer of the tongue. The object of the communication is to draw the attention of medical men to the diagnosis of early malignant disease of the tongue, apparently so insignificant as to be easily overlooked.

He considers three stages in the development of the large majority of cases of cancer of the tongue:

1. *Predisposing conditions,* such as leucoplakia, ichthyosis, chronic superficial glossitis, which may not lead to a cancerous condition, but undoubtedly render the individual much more liable to malignant changes.

2. *Precancerous conditions,* such as warty growths, thick plaques, sore places, which, though not actually cancerous, inevitably proceed to cancer unless completely removed.

3. *Actual cancer,* in one of its various forms, when it is obvious to the surgeon, and which even excites suspicion in the lay mind.

The author furnished seven specimens of lesions excised during the precancerous stage on request of the Imperial Cancer Research. To the surprise of Mr. Butlin, all seven turned out to be young epitheliomata, on microscopic examination, in continuous sections.

The author doubts whether there are really any conditions perceptible to human sight and touch which are truly precancerous in the usual acceptation of the term, but are rather cases of early malignant disease.

The paper is accompanied by a beautifully colored plate showing the tongues from which the specimens were taken and also of the microscopic sections of the parts removed.

C. B. S.

Oblique Inguinal Hernia.

Mr. R. W. Murray (*B. M. J.*, June 16th, 1906) discusses the etiology and treatment of oblique inguinal hernia. He holds the view that in a large percentage of hernias in adults the sac is preformed, or, in other words, the bowel or omentum descends into a patent processus vaginalis. In the majority of mammals the muscular and aponeurotic structures forming the inguinal canal are practically the same as in man. The natural posture of the animal, whether horizontal or vertical, determines the potency or otherwise of the processus vaginalis testis. In quadrupeds this process invariably communicates with the general peritoneal cavity, and in rodents, although the opening is so free as to allow the testes to pass periodically from the abdomen to the scrotum, yet hernia does not occur in these animals. In the quadrumana, whose bodies are as often vertical as horizontal, the funicular process is very narrow, and in the higher apes and man the process is normally completely obliterated.

The author believes, from both clinical and post-mortem

observations, that although a potential hernial sac exists in quite a large percentage of all persons, yet hernia does not necessarily occur. He contends that the main factor in the production of a hernia is a weak "inguinal sphincter," by which he refers to the structures guarding the internal abdominal ring. If the processus vaginalis is not obliterated and the internal abdominal ring is small and the muscles guarding it are powerful, the probability of a hernia occurring is slight. If, on the other hand, the ring be large and the muscles weak, the chances of a hernia occurring are considerable. This would account for the frequency of the inguinal variety in infants. The increased muscular strain at puberty and the weakening of the muscular fibres later on in life, would account for the onset of a hernia during these two periods.

Mr. Murray states that in infants, where the protrusion is not large, a cure may be brought about by a truss, because the instrument prevents the bowel or omentum descending, and maintaining the potency and dilating the funicular process and at the same time stretching the injured sphincter. The lumen of the process thus becomes extremely small and makes the descent of the bowel very difficult. It is improbable, however, that obliteration of the patent funicular process is ever brought about in this manner,

On account of the uncertainty of a cure by means of a truss, and the subsequent dangers of a potential hernial sac, the author strongly advocates operation during early life, in bottle-fed babies, even as early as three months ; and in breast-fed infants, after the eighth month. He lays great stress upon tying the sac at the level of the internal ring, and to insure this he always splits the fibres of the external oblique aponeurosis to the level of the internal ring, ties off the sac as high as possible, in order to present as far as possible a smooth, flat, and unbroken peritoneal surface. He then overlaps the two flaps of the split external oblique, and in this way narrows and lengthens the inguinal canal. No attempt is made to stitch the conjoined tendon to Poupart's ligament.

The same principles of treatment hold good in adults. The essential point is to remove the sac, so as to avoid leaving a depression at the internal abdominal ring, and at the same time to do nothing to impair the action of an already weak and stretched inguinal sphincter.

The author finds fault with the majority of modern methods of cure by operation as being too elaborate and med-

dlesome, the intention being to fill a gap rather than to restore lost muscular power. He attributes the success of the usual operations to the fact that the sac is ligatured high, and he expresses doubt that structures which are transposed and stitched together remain permanently in such a position.

Mr. Murray has used with much success the same simple method of operation in adults. Professor Kocher, of Berne, recommends a very similar procedure.

In elderly patients, where the sac is wide and the application of a truss is inmpossible, the writer advocates the use of a thick rubber pad, having an aperture for the transmission of the cord and vessels. This pad is imbedded in the tissues, and is held in place by sutures. He has also used gauze for the same purpose, and reports good results. C. B. S.

Observations Upon the Cause and Treatment of Perineal Abscess, and of Periurethral Suppurations Above the Triangular Ligaments.

Dr. Samuel Alexander, in *Medical Record,* October 28th, 1905, says:

It is claimed by many surgeons that periurethral abscess is sometimes not of urethral origin. These surgeons content themselves by merely incising such abscesses without opening the urethra, and include the later procedure only when there is urinary infiltration. Alexander has noted that many of these cases will recur at the original site of infection, even if, at the time of operation, no communication with the urethra is determinable. The author, from a long series of observations, believes that all cases of perineal abscess arise from the urethra; and in the cases noted above, the infection arises either through fissures in the urethra, or from infections above the triangular ligament, in the form of prostatitis, bulbitis or inflammations of the Littré or Cowper glands. Fissures in the urethra have been proven to occur by Delbet after overdistention of the urethra. For this reason Alexander condemns forced irrigations in the treatment of gonorrhea. The infections of the Littré and Cowper glands in cases of perineal abscess have been abundantly proven after careful dissections by Matz and Bartrina in 1903. A third and obvious cause of perineal abscess is a laceration of the urethra by violence, either external or internal. The perineal infection from a Cowperitis, a Littréitis or a prostatitis may arise either by lymphatic infection along the membranous urethra or after rupture of the abscess into the urethra. The view that perineal

abscess, in cases of stricture, is due to ulceration above the point of stricture, cannot be accepted.

The facts noted above explain why it is that despite the urethral origin of all perineal abscesses, urinary infiltration does not necessarily follow; it also explains the cases of recurrence after simple incision. For these reasons, Alexander's rule at present is to open the membranous urethra in all cases throughout its entire length; all secondary abscesses above the triangular ligament are opened and drained either into the urethra or into the perineal opening. The author emphasizes the importance of early diagnosis, by careful external and internal palpation. As soon as the diagnosis is made of suppuration above the triangular ligament, operation should be performed to prevent further infection.—*Amer. Jour. of Surgery.*

Report of First Congress of the International Surgical Society.

Discussion on the treatment of prostatic hypertrophy showed a marked increase in the number of friends of prostatectomy by the perineal route. Rydigier recommended perineal enucleation. Reginald Harrison prefers the suprapubic method. Rovsing declared that castration and the Bottini operation were abandoned, but that vasectomy deserved more consideration. The condition of the intrinsic muscles of the bladder should to a great extent determine the treatment. If the bladder wall is paralyzed, catheter life or merely perineal drainage is indicated; in soft, diffuse, parenchymatous prostates vasectomy cured 60 per cent.; an obstructing middle lobe can be cured by partial suprapubic removal. Complete prostatectomy should be performed where malignant degeneration, repeated hemorrhages or prostatic abscess are present. When vasectomy has failed suprapubic removal of the prostate is indicated. Too many prostatectomies are performed, for the gravity of this operation which abolishes the power not only to procreate but also to conjugate, is underestimated.

Hartmann favors the transvesical operation, as does Carlier. Klapp advocated spinal anesthesia. Verhoogen said that the prostatic urethra should be sacrificed, for after removal of the prostate, the neck of the bladder sinks down and the prostatic portion of the urethra becomes useless. During narcosis he prefers a ventral position of the patient. Kummel has abandoned castration because of its profound effects on the patient; he uses the Bottini method in selected cases, but prefers pros-

tatectomy. Freudenberg used the Bottini cauterization in 152 cases with 84 per cent. of cures and 7.2 per cent. mortality. He says this is the ideal method for the genito-urinary specialist, as the operation incapacitates for only a few days and the generative function is not destroyed. He prefers prostatectomy in cases with very large prostates, with tumor-like projection of the midle lobe and alkaline cystitis. Albarran reviewed the entire discussion and said that he personally favored perineal operations. Frank mentioned many recurrences he had seen after the Bottini operation.—*Am. Jour. of Surgery*—Report of First Congress of the International Surgical Society.

Editorials.

TORONTO WESTERN HOSPITAL.

In the last report of this Institution we find some interesting particulars as to its history. In the year 1896 a few Physicians of Toronto became incorporated under the Friendly Societies' Act and rented a house for Hospital purposes on Manning Avenue. Commencing with this one building it was soon found that three were required, and it became evident that a more complete organization was necessary, and consequently a special Act of Incorporation was obtained in 1899 from the Ontario Legislature. In May of that year a park lot was secured of 4 1-2 acres, and the building thereon was renovated and made suitable for hospital purposes. This building was opened December 16th, 1899, with accommodation for 35 patients and requiring 13 nurses.

The Hospital has now five buildings in use, together with many tents of various sizes with accommodation for 130 patients and a staff of over 40 nurses. Plans are now completed for another building, which will furnish additional accommodation for about 100 patients, each paying about $3.50 a week, making the Institution one of more than 200 beds. It is hoped that ere many years the Institution will have accommodation for about 500 patients.

NEW EPILEPTIC HOSPITAL.

We are pleased to announce that the New Hospital for Epileptics has been formally opened. This very-much-needed Institution is situated in Woodstock, and is composed at present of three buildings. Of these the central or administration building is the most imposing. On either side is placed a building on the Cottage plan measuring about 90 feet wide by 40 feet long with an addition in the rear. Each of these Cottage buildings has accommodation for 20 patients. It is hoped, however, that the capacity of each will soon be increased by

the addition of a third story, and that from this small beginning will grow a large Hospital within a few years. Two additional Cottages will soon be built, and it is probable that more will follow from year to year until the Institution has altogether accommodation for several hundred patients. Dr. J. J. Williams, formerly of Lisle, is the Medical Superintendent.

THE TEACHING OF MIDWIFERY IN ENGLAND.

There has been a feeling for some time that the teaching of Midwifery in England, and especially in London, has not been in all respects satisfactory. In an interesting editorial on this subject in the *British Medical Journal* of June 9th of this year we are told that the General Medical Council has recently taken vigorous action. It sent out to every medical school a number of detailed inquiries as to the teaching of Midwifery, analyzed the answers, and published the conclusions drawn from them.

We are told that though the teaching may now be imperfect there is great improvement as compared with 30 or 40 years ago. It is stated that in some of the schools students were allowed to teach themselves Midwifery, but lately the arrangements for the teaching of Midwifery and the safety of maternity patients have been more adequate, although not yet up to the standard which the Council thinks necessary.

It seems to be exceedingly difficult in Great Britain, United States and Canada to procure proper facilities for teaching Midwifery at the bedside. In Scotland, Ireland, and the English Provincial Schools, the students get a large amount of practical teaching at Infirmaries, Dispensaries, and Lying-In Hospitals, most of which institutions are not officially connected with Medical Schools. In London the student acquires some Midwifery experience in an Out-Door Maternity Department.

The Committee of the General Medical Council in its report tells us that in Lying-In Hospitals the student " is always under the supervision of the matron, resident medical officer, or physician, and is placed in favorable circumstances to receive

bedside instructions in the progress of labor and the puerperium." Whereas, "the instruction given in Out-Door maternities during labor and the puerperium is at the best of a meagre character." Full instructions as shown may be given within the walls of a Lying-In Hospital, but in Out-Door maternities it is not possible inasmuch as the student attends the great majority of his cases alone.

The report contains certain recommendations as follows: The student is not to attend midwifery till he has done his clerking and dressing, that is, has gained some practical experience of medicine and surgery, and he is to attend 20 cases under direct supervision in a Lying-In Hospital or the maternity charity of a General Hospital.

The Journal, in commenting on these recommendations, expresses the opinion that theoretically they may be excellent, but under present circumstances they are impracticable. It points out that at present there is only one Lying-In Hospital in London to which students are admitted, Queen Charlotte's. At this Hospital during 1905, 27 students and 24 qualified practitioners attended. If the new recommendations are to be carried into effect accommodation must be found for about 500 students annually.

Although it is easy to understand that almost insuperable difficulties stand in the way of ideal teaching we may venture to hope that a greatly improved condition of things in connection with the teaching of midwifery in England will come into existence within a few years.

ONTARIO MEDICAL COUNCIL.

The Annual Meeting of the Ontario Medical Council was held in Toronto July 2nd to 7th, inclusive.

The meeting was opened under the Chairmanship of Dr. Albert A. Macdonald, the last year's President. The first order of business was the election of officers with the following results:—

President: Dr. W. H. Moorehouse of London.

Vice-President: Dr. Wm. Spankie of Wolfe Island.

Treasurer: Dr. H. Wilberforce Aikins.

Registrar: Dr. R. A. Pyne; Counsel: Mr. H. S. Osler; Prosecutor: Mr. Chas. Rose; Auditor: Dr. J. C. Patton.

On motion of Drs. Bray and Macdonald, it was decided to place the name of Dr. William Osler upon the Register of the Council "as a slight recognition of his great ability and the high standard he has attained in his profession."

The following discipline committee was selected for the present year: Dr. J. L. Bray, Chatham; Dr. J. A. Robertson, Stratford; Dr. G. Henderson, Strathroy; and Dr. J. Lane, Mallorytown.

NOTES.

The Thirty-Ninth annual meeting of the Canadian Medical Association will be held in Toronto on the afternoon of the 20th of August and the forenoon of the 21st. The meetings, which will be of an executive character, will be held in the New Science Building on College Street, at the head of McCaul St. The first session will convene at 2 o'clock p.m. in the North lecture room. The chief item of business will be the reception of the report of the Special Committee on Reorganization, and for this alone there should be a large and representative attendance.

Queen's Medical Faculty.

The building of the Medical Faculty of Queen's University, Kingston, was partially destroyed by fire July 12th. The many friends of Queen's will be glad to learn that the work of repairing the building is well under way. It is expected that the building will be ready for occupation about the end of August. New apparatus to replace that destroyed is now on its way from England. It unfortunately happened that the contents of the Museum were destroyed, otherwise no inconvenience would be felt during the coming winter session.

We offer our congratulations to the Canadian Journal of Medicine and Surgery, on the excellent appearance of its special July number.

University of Toronto.

The following gentlemen will constitute the Board of Governors of the University of Toronto, the Chancellor and President ex-officio:

For a two years' term—Dr. John Hoskin, K.C., Hon. S. H. Blake, Sir Mackenzie Bowell, of Belleville; Mr. Jas. L. Englebert, of Petrolia; Rev. Father Teefy, Judge Colin Snider, of Hamilton.

For a four years' term—Mr. Byron E. Walker, Mr. G. R. R. Cockburn, Mr. Chester D. Massey, Rev. D. Bruce Macdonald, Mr. W. T. White, Mr. E. C. Whitney, of Ottawa.

For a six years' term—Professor Goldwin Smith, Chief Justice Moss, Mr. E. B. Osler, M.P., Mr. J. W. Flavelle, Rev. J. A. Macdonald, Mr. H. T. Kelly.

Toronto General Hospital.

The new Board of the Toronto General Hospital is constituted as follows:—Appointed by the Government, Mr. Cawthra Mulock, Prof. A. B. Macallum, Mr. Wm. Mackenzie, Mr. W. F. MacLean, Mr. Eugene O'Keefe, Mr. W. J. Douglas, Mr. Chas. Cockshutt, Dr. J. Orlando Orr.

Representing the University of Toronto:—Acting President, Mr. M. Hutton, Dr. John Hoskin, Mr. Byron E. Walker, Rev. J. A. Macdonald, Mr. W. T. White.

Representing the City:—Mayor Coatsworth, Ald. Dunn, Ald. Noble, M.D., Ald. McGhie, Controller Jones.

Representing the Subscribers:—Mr. M. J. Haney, Mr. P. C. Larkin, Mr. J. W. Flavelle, Mr. W. E. Rundle, Mr. H. C. Cox, Mr. C. D. Massey, Mr. H. H. Fudger.

The first meeting of this Board was held at the General Hospital July 18th. Mr. J. W. Flavelle was elected Chairman and Mr. P. C. Larkin, Vice-Chairman. The following sub-committees were formed:

Executive Committee:—Mr. Flavelle, Chairman, Mr. Byron E. Walker, Mr. W. T. White, Mayor Coatsworth, Dr. Noble, Mr. Cawthra Mulock, Prof. A. B. Macallum, Mr. M. J. Haney, and Mr. P. C. Larkin.

House Committee:—Mr. P. C. Larkin, Chairman, Mr. Chas. Cockshutt, Dr. John Hoskin, Controller Jones, Mr. W. F. Maclean, Ald. Dunn, Rev. J. A. Macdonald, Mr. W. J. Douglas, Prof. Hutton.

Finance Committee:—Mr. H. H. Fudger, Chairman, Mr. W. E. Rundle, Mayor Coatsworth, Mr. Byron E. Walker,

Mr. Wm. Mackenzie, Mr. Eugene O'Keefe, Mr. M. J. Haney, Mr. H. C. Cox, Mr. Cawthra Mulock, and Mr. P. C. Larkin.

Building Committee:—Mr. M. J. Haney, Chairman, Mr. H. C. Cox, Ald. McGhie, Dr. Orr, Mr. Chester Massey, Mr. Cawthra Mulock, Mr. Eugene O'Keefe, Mayor Coatsworth, Mr. W. T. White, and Prof. A. B. Macallum.

Tuberculosis Exhibition.

An exhibition with the above title will be given in Toronto in the latter part of August and the first few days in September. It will commence August 21st and continue about two weeks, that is, during the meeting of the British Medical Association and the first week of Dr. Orr's exhibition.

The first exhibition of this sort was held in New York, and was conducted by the National Association, for the study and prevention of Tuberculosis, under the leadership of such men as Dr. Knopf, Vincent Bowdige and other well-known physicians.

It is stated that there will be over 100 different exhibits, including large exhibits from Paris, Switzerland, Baltimore, Philadelphia, Denver, Col., Adirondacks, Muskoka and Toronto.

Other particulars as to the exhibition may be learned from Mr. J. S. Robertson of Toronto, Secretary of the National Sanitarium Association.

Ontario Medical Library Association.

Hours of Opening: The library is open to members each week-day from 10 a.m. to 1 p.m. and from 2 p.m. to 6 p.m. except Saturdays, when it closes at 1 p.m.

Loans: Books can be loaned to members for two weeks, periodicals for three days.

Loans outside Toronto: Books and journals will be loaned to members of the Ontario Medical Association outside of Toronto, provided:

1. That such precautions be taken in packing as to guard against any injury in transportation.
2. That the borrower shall pay express charges both ways.

The library will be glad to receive gifts of books, journals and reprints.

Recent Accessions to the Library.

Ashton: Practice of Gynaecology, 1905.
von Borgman: System of Surgery, 5 vols.

Babcock: Diseases of the Heart, 1903.
Barker: Spalteholz's Atlas of Human Anatomy, 1905.
Baruch: Principles and Practice of Hydrotherapy, 1904.
Belot: Radiotherapy, 1905.
Barr: Mental Defectives, 1905.
Cheyne & Burghard: Manual of Surgical Treatment, 6 vols.
Cabot: Modern Clinical Medicine, 2 vols. published.
Chittenden: Physiological Economy in Nutrition, 1905.
Cushny: Pharmacology and Therapeutics, 1905.
Edgar: Practice of Obstetrics, 1904.
Gould: Biographic Clinics, 1905.
Hewlett: Krehl's Clinical Pathology, 1905.
Huntington: Anatomy of the Human Peritoneum, 1903.
Hutchison: Food and Dietetics, 1906.
Kelly & Hurdon: The Vermiform Appendix and its Diseases, 1905.
Lindsay: Diseases of the Lungs and Heart, 1904.
Mummery: After-Treatment of Operation, 1903.
Moynihan: Abdominal Operations, 1905.
Nothnegel: System of Medicine, 11 vols.
Ochsner: Clinical Surgery, 1904.
Park (Roswell); An Epitome of the History of Medicine, 1903.
Posey & Wright: Diseases of the Eye, Ear, Nose and Throat.
Osler: Practice of Medicine, 1905.
Robson & Moynihan: Diseases of the Stomach, 1904.
Sahli: Diagnostic Methods, 1905.
Scudder: Treatment of Fractures, 1904.
Wright (A. H.): Text-Book of Obstetrics, 1905.
Whitman: Orthopedic Surgery, 2nd ed.

Transactions, Reports and Periodicals.

Association of American Physicians.
American Pediatric Soc.
American Climatological Association.
American Roentgen Ray Co.
American College of Physicians.
American Laryngological Association.
American Laryn., Rhino. and Otol. Soc.
Henry Phipps Institute.
Münchener Medizinische.
Deutsche Medizinische.

BRITISH MEDICAL ASSOCIATION.

We learn from the local Honorary Secretaries that very satisfactory arrangements have been made for the coming meeting. We are asked to give some prominence to the fact that Reception Committees exist in Montreal, Quebec, and other cities in Canada. Dr. T. J. Roderick is Chairman of the Reception Committee at Montreal; Dr. M. J. Ahearn is Chairman at Quebec; Dr. Moorhouse is Chairman at London; Dr. G. M. Campbell is Chairman at Halifax; Dr. McInerery is Chairman at St. John, N.B.; Dr. J. D. Lafferty is Chairman at Calgary; Dr. O. M. Jones is Chairman at Victoria; and Dr. Chown is Chairman at Winnipeg.

We are also indebted to the Honorary Secretaries for the following information:

Officers of the British Medical Association.

President—George Cooper Franklin, F.R.C.S, Eng, L.R.C.P., London ; Surgeon, Leicester Infirmary, Leicester.

President-Elect—Richard Andrews Reeve, B.A., M.D., LL.D., Dean of the Faculty of Medicine, University of Toronto.

Past President—William Collier, M.A., F.R.C.P., Physician to the Radcliffe Infirmary, Oxford, and Litchfield Lecturer in Medicine, University of Oxford.

Charman of Representative Meetings.—Sir Victor Horsley, F.R.C.S., Eng.; F.R.S.; Surgeon, University College Hospital, National Hospital for Paralysed and Epileptic ; London, 25 Cavendish Square, W.

Charman of Council—Henry William Browne, M.D., Ch.B., F.R.C.S., Edin. ; Consulting Surgeon, West Bromwich District Hospital.

Treasurer—Henry Radcliffe Crocker, M.D., F.R.C.P., Physician, Skin Department, University College Hospital, London.

Honorary Local Treasurer—James Frederick William Ross, M.B., L.R.C.P., London, 481 Sherbourne Street, Toronto.

General Secretary—Guy Elliston, Esq., 429 Strand, London, W.C.

Honorary Local Secretaries.—Frederic Newton Gisborne Starr, M.B., Toronto. Prof. John J. MacKenzie, B. A., M. B., Toronto. David James Gibb Wishart, B.A., M.D., C.M., L.R.C.P., (London), Toronto.

N.B.—All communications should be addressed to the above at the Medical Laboratories, Queen's Park, Toronto.
Cable Address—Stamawis—Toronto.

Ladies Entertainment.—Convener: Mrs. R. A. Reeve, 48 Bloor Street E., *Secretary*: Mrs. H. T. Machell, 95 Bellevue Avenue, Mrs. E. B. Osler, 13 Beau Street, Rosedale, Mrs. James Scott, 90 Carlton Street, Mrs. J. Ross Robertson, 291 Sherbourne Street, Mrs. Alex. McPhedran, 151 Bloor Street W., Mrs. F. N. G. Starr, 112 College Street, Mrs. Adam Wright, 30 Gerrard Street E., Mrs. F. LeM. Grasett, 208 Simcoe Street, Mrs. Stowe Gullen, 461 Spadina Avenue, Mrs. Temple Blackwood, 307 Sherbourne Street.

PROVISIONAL PROGRAMME.

TUESDAY, AUGUST 21st.

9.30- 12.30 a.m. Meetings of Sections.
1.00 p.m. Luncheon for Visiting Ladies.
2.00 p.m. Address of Welcome, Introduction of Guests, Delegates, etc., and President's Address.
4.30- 6.00 p.m. Reception and Garden Party, by His Honor the Lieutenant-Governor and Mrs. Clarke at Government House.
6.30 p.m. President's Dinner.
8.00 p.m. General Meeting.
8.30 p.m. Address on Obstetrics, Dr. W. S. A. Griffith.
9.30 p.m. Reception by the President and Mrs. Reeve in the University Quadrangle.

WEDNESDAY, AUGUST 22nd.

9.30- 12.30 a.m. Meetings of Sections.
1.00 p.m. Luncheon by invitation of the Dominion Alliance.
2.30 p.m. Address on Medicine, Sir James Barr, M.D.

3.30 p.m. Garden Party (for ladies), University Women's Club, at Annesley Hall.
4.30 p.m. Garden Party, J. W. Flavelle, Esq., LL.D.
8.30 p.m. Address on Surgery, Sir Victor Horsley, F.R.S.
9.30 p.m. Reception by the Mayor and the City Council, at the City Hall.

THURSDAY, AUGUST 23rd.

8.00 a.m. Ladies Excursion to Niagara Falls.
9.30- 12.30 a.m. Meetings of Sections.

1.30 p.m. Luncheon at the Lakeside Home (limited).
2.30 p.m. International Golf Matches at Toronto and Lambton Golf Clubs.
7.30 p.m. Annual Dinner.
8.00 p.m. Reception for Ladies.

FRIDAY, AUGUST 24th.

9.30-12.30 a.m. Meetings of Sections.
1.00 p.m. Luncheon for Visiting Ladies.
2.30 p.m. General Meeting.
4.30 p.m. Garden Party, E. B. Osler, Esq., M.P.
8.30 p.m. Reception by the Royal Canadian Yacht Club at the Island.

SATURDAY, AUGUST 25th.

Excursion to the Niagara Power Company's Works, through the courtesy of Sir Henry M. Pellatt (limited).

Excursion to Muskoka Lakes (limited).

Excursion to Lambton Golf Links, through the courtesy of the President, A. W. Austin, Esq. (limited).

Excursion to Ontario Agricultural College, Guelph (limited).

Excursion probably to Hamilton (limited).

ADDRESSES.

An Address in Medicine will be delivered by SIR JAMES BARR, M.D., F.R.C.P., F.R.S.E.—Subject: The circulation viewed from the peripheral standpoint.

An Address in SURGERY will be delivered by SIR VICTOR HORSLEY, M.B., F.R.C.S., F.R.S.—Subject: The Technique of operations on the Central Nervous System.

An Address in OBSTETRICS will be delivered by WALTER SPENCER ANDERSON GRIFFITH, M.D., F.R.C.P.—Subject: Not yet announced.

The order given below will not necessarily be followed in the final programme.

SECTION IN ANATOMY.

The following subjects have been selected for discussion:

(*a*) "The structure of the Cardiac Glands of Mammals and their phylgenetic significance, a reply to G. Haane," by Dr. R. R. Bensley, University of Chicago.

(*b*) "Reports from the Hull Laboratory of Anatomy, University of Chicago," by Dr. R. R. Bensley, Chicago.

(*c*) "The Cytological character of the Cellular Components of the islets of Langerhans," (N. A. Lane), by Dr. R. R. Benslev, Chicago.

(*d*) "The Structure of the Lachrymal and Harderian Glands of Mammals," (J. Sundwall), by Dr. R. R. Bensley, Chicago.

(*e*) "The anatomical relations and blood supply of the palatine tonsil," by Dr. J. C. Wilson, Chicago.

(*f*) "An unusual peritoneal anomaly simulating retro-peritoneal hernia," by Dr. J. C. Wilson, Chicago.

(*g*) "On the Chromatin character of certain parietal cells," by Dr. B. C. Harvey, Chicago.

(*h*) "On a case of polydactylism in the foot," by Dr. B. C. Harvey, Chicago.

(*i*) "A case of inervation of M. rectus lateralis oculi by the N. oculimotorius, with absence of N. abducens," by Dr. B. C. Harvey, Chicago.

(*j*) "The development of the stria vascularis," by Dr. C. E. Shambaugh, Chicago.

(*k*) "Mucous stains of the Cardiac Glands of the pig," by Dr. R. R. Bensley, Chicago.

(*l*) "Preparations of the islets of Langerhans to illustrate the characters of the different kinds of cells composing them," by Dr. R. R. Bensley, Chicago.

(*m*) "Sections of the Lachrymal Glands," by Dr. R. R. Bensley, Chicago.

(*n*) "A heart in which the single right pulmonary vein opens opposite the septum atriorum which is incomplete posteriorly," by Dr. J. C. Wilson, Chicago.

(*o*) "Preparations of the human stomach to illustrate the methods of differentiating the cellular components," by Dr. D. G. Revell, Chicago.

(*p*) "The circulation in the labyrinth of the ear in the pig," by Dr. C. E. Shambaugh, Chicago.

(*q*) "The development and variation of the nerves of the posterior limb in man," by Prof. C. R. Bardeen, University of Wisconsin.

(*r*) "The Arteriae Rectae of the Mammalian Kidney," by Prof. Carl Huber, University of Michigan.

(*s*) "The form of the Uriniferous Tubules of certain of the lower vertebrates," by Prof. C. Huber, University of Michigan.

(*t*) "The Morphology of the Hip-Joint," by Dr. Jenkins, King's College.

(*u*) "The Marginal sinus," by Dr. Jenkins, King's College.

(*v*) "A Symelian Monser," by Dr. Gladstone, Middlesex Hospital.

Papers have also been promised by Prof. J. Playfair McMurrich, University of Michigan; Dr. Ross E. Harrison, University of Johns Hopkins, Baltimore; Dr. Knower, Baltimore; Dr. Streeter, Baltimore; Dr. Waterson, Edinburgh University; Dr. Donald Armour, London; Dr. Sanders, London; Dr. Paterson, Liverpool.

SECTION IN DERMATOLOGY.

The following subjects have been selected for discussion:

(*a*) "The Teaching of Dermatology," by Dr. Norman Walker, Edinburgh.

(*b*) "Eczema," to be opened by Dr. A. J. Hall, Sheffield.

(*c*) "Psoriasis and light," by Dr. J. N. Hyde, Chicago.

(*d*) "Errors in the treatment of Cutaneous Cancer," by Dr. A. R. Robinson, New York.

(*e*) "The wrong and right uses of milk in certain diseases of the skin," by Dr. L. D. Buckley, New York.

(*f*) "Dermatitis Vegetans," by Dr. Williams Thomas Corbett, Cleveland.

(*g*) "Multiple and Successive Chancres and Pathology of Syphilitic Infection," by Dr. R. W. Taylor, New York.

(*h*) Lantern slide demonstration, by Dr. J. A. Fordyce, New York.

(*i*) Photographs, by Dr. F. J. Shepherd, Montreal.

(*j*) Papers will also be given by Dr. Gilchrist, Baltimore; J. C. Johnston, New York; and S. Pollitzer, New York.

SECTION IN LARYNGOLOGY AND OTOLOGY.

The following subjects have been selected for discussion.

(*a*) "Operations for the correction of deviations of the Nasal Septum," to be opened by Dr. St. Clair Thomson, London; and followed by Dr. Roe, Rochester; Dr. McDonagh, Toronto; Dr. Freer, Chicago, and others.

(*b*) "On the Laryngeal disturbances produced by Voice Use," to be opened by Dr. Middlemas Hunt, of Liverpool, followed by Dr. Chappell, of New York; Dr. Birkett, of Montreal; Dr. Casselberry, of Chicago, and others.

(*c*) "On the Indications for the Ligation of the Jugular Vein in Otitic Pyæmia," to be opened by Dr. Hugh Jones, Liverpool, and followed by Dr. McKernon, New York, and others.

(*d*) "On Laryngeal Stenoses in Infants," to be opened by Dr. Logan Turner, Edinburgh, followed by Dr. Ashby, Manchester, and others.

The latter discussion will be before a Session held jointly with the Section on Children's Diseases.

The following Papers have also been offered:

(*a*) "The Pathogenic Influence of Aural Lesions on Systemic Disease," by Dr. MacCuen Smith, Philadelphia.

(*b*) "Polypus," by Dr. Eugene Yonge, Manchester.

(*c*) "To what extent is it advisable to adopt conservative methods in the treatment of Aural Diseases," by Dr. Bacon, New York.

(*d*) "The value of the Blood-clot as a primary dressing in Mastoid Operations," by Dr. Clarence Blake, Boston.

(*e*) "Skiagraphy as an aid in the diagnosis of treatment in the diseases of Accessory Sinuses of the nose," with lantern exhibition of negatives, by Dr. Coakley, New York.

(*f*) "Some Cases of Suppurative Frontal Sinus Disease presenting unusual features," by Dr. Perry Goldsmith, Belleville.

(*g*) "Abductor Paralysis with a report of two cases," by Dr. George L. Richards, Fall River, Mass.

(*h*) "Exhibition of specimens, drawings and instruments in connection with the Submucous Resection of the deviated Nasal Septum," by Dr. W. L. Ballenger, Chicago.

(*i*) The use of the Cold Wire Snare in removing Hypertrophied Tonsils," by Dr. Alice G. Bryant, Boston.

(*j*) "Thyrotomy and Laryngectomy for malignant disease of the Larynx," by Dr. Chevalier Jackson, Pittsburg.

(*k*) "A study of the Anatomy of the Accessory Sinuses of the Nose from reconstructions," exhibition of drawings and preparations by Dr. H. W. Loeb, St. Louis.

(*l*) "The origin of Sputa," by Dr. W. Peyre Porcher, Charleston.

Papers are also expected from Dr. Smurthwaite, Newcastle; Dr. Watson Williams, Dr. Herbert Tilley, and others.

SECTION IN MEDICINE.

The following subjects have been selected for discussion :

Tuesday, August 21.—Discussion: "Blood Pressure in Relation to Disease." The subject will be treated under the following headings:

(*a*) "Physiological Introduction," by Dr. Percy M. Dawson, Baltimore.

(*b*) "Clinical Methods of Investigating Blood Pressure," by Dr. G. A. Gibson, Edinburgh

(*c*) "Pathology and Therapeutics of Morbid Blood Pressure," by Sir Wm. Broadbent, London.

(*d*) "The Relation of Blood Pressure to Arterial Sclerosis," by Prof. Clifford Allbutt, Cambridge. The following will also take part: Dr. J. Mackenzie, Burney; Sir James Barr, Liverpool; and others.

WEDNESDAY, AUGUST 22—A joint discussion with the Section of Physiology on "Over Nutrition and Under Nutrition, with special reference to Proteid Metabolism," to be opened by Prof. Chittenden, Yale; to be followed by Professor Halliburton, London; Professor Wm. Osler, Oxford; Dr. Otto Folin, Waverley, Mass.; Dr. R. Hutchison, London; and others.

THURSDAY, AUGUST 23.—"Some Aspects of Heart Block," by Professor Wm. Osler, Oxford, Dr. J. Mackenzie, Burnley, Dr. Erlanger, Baltimore, Dr. Aschoff, Freiburg, Dr. W. S. Morrow, Montreal, Dr. G. A. Gibson, Edinburgh, and others.

FRIDAY, AUGUST 24.—Papers.

The following papers have been arranged for:

(*a*) "Some Clinical Manifestations Visceral and General, of Arterio-sclerosis," by Dr. Alfred Stengel, Philadelphia.

(*b*) "Paracentesis of the Pericardium; Indications and Methods," by Dr. George Dock, Ann Arbor.

(*c*) "Gastric Neurasthenia," by Dr. Hugh A. McCallum, London, Ont.

(d) "Syringomyelia, with a Cavity traced from the Sacral Region to the Upper Part of the Internal Capsule," by Dr. W. G. Spiller, Philadelphia.

(*e*) "The Treatment of Typhoid," by Dr. F. T. Smith, London.

(*f*) "The Treatment of Typhoid," by Dr. W. B. Thistle, Toronto.

(*g*) "The Pathology of Neurasthenia," by Dr. T. D. Savill, London.

(*h*) "Amino-acids and Metabolism," by Dr. L. F. Barker, Baltimore.

(*i*) "Four Cases of Gangrene of the Lung; Operations, Recovery," by Dr. Ridley MacKenzie, Montreal.

(*j*) "The Present Status of Military Medical Arrangements in Canada," by Dr. J. T. Fotheringham, Toronto.

(*k*) "The Treatment of Neurasthenia in General Hospitals," by Dr. D. C. Meyers, Toronto.

(*l*) "The Effect of Posture upon the Position of the Heart," by Dr. R. D. Rudolf and Dr. S. Cummings, Toronto.

(*m*) "The Relation of Gastric Motility to the Process of Digestion," by Dr. Alex. McPhedran, Toronto.

(*n*) "Neurotic Affections of the Respiratory System," by Dr. A. R. Gordon, Toronto.

(*o*) Title not yet announced, paper by Dr. J. J. Putnam, Boston.

SECTION IN OBSTETRICS AND GYNECOLOGY.

The following subjects have been selected for discussion :

(*a*) "The Changes in Uterine Fibroids after the Menopause, with Special Reference to Operations," to be opened by Dr. C. L. A. Reed, Montreal.

(*b*) "Hyperemesis Gravidarum," to be opened by Dr. J. C. Cameron, Montreal.

(*c*) "The Appendix Vermiformis in Relation to Pelvic Inflammation," to be opened by Dr. T. Arthur Helme.

The following papers are also promised :

(*a*) "The Treatment of Eclampsia," by Dr. D. J. Evans, Montreal.

(*b*) "Indications for Cesarean Section, other than Pelvic Deformities or Tumors," by Dr. H. L. Reddy, Montreal.

(*c*) "Ectopic Gestation." by Dr. J. F. W. Ross, Toronto.

(*d*) "Metrorrhagia from Conditions of Uterus, other than Neoplastic formations," by Dr. Wm. Gardner, and Dr. J. R. Goodall, Montreal.

(*e*) "The Value of Conservative Treatment of the Ovaries in View of the After History of Many Patients," by Dr. Joseph Price, Philadelphia.

(*f*) "The Surgical and Serum Treatment of Puerperal Sepsis," by Dr. Louis S. McMurtry, Louisville.

(*g*) "Uterine Myomata and their degenerative changes," (with Lantern demonstrations), by Thos. S. Cullen, Baltimore.

(*h*) "Concealed Accidental Hemorrhage," by Dr. A. H. Wright, Toronto.

SECTION IN OPHTHALMOLOGY.

The following subjects have been selected for discussion :

TUESDAY, AUGUST 21.—"Rare forms of Choroiditis," to be opened by Mr. J. B. Lawford, London, and followed by Dr. Hill Griffith, Manchester ; Dr. H. Knapp, New York, and Dr. C. Bull, New York.

(*a*) "Recent Cases of Wood Alcohol Poisoning," by Mr. Casey Wood, Chicago.

(*b*) "Trachoma," by Dr. G. S. Ryerson, Toronto.

(*c*) "Peridectomy," by Dr. L. Webster Fox, Philadelphia.

(*d*) "Obstruction of Central Retinal Vein," (with lantern demonstrations), by F. H. Verhoeff, Boston.

(*e*) "Transillumination of the eye with demonstration of the new Ocular Transilluminator, by Dr. H. V. Wurdeman, Milwaukee.

WEDNESDAY, AUGUST 22.—" Sympathetic Ophthalmia," to be opened by Dr. G. H. Burnham, Toronto, and followed by Dr. Charles A. Oliver, Philadelphia ; Mr. Arnold Lawson, London, and Dr. J. W. Stirling, Montreal.

(*a*) " On Sympathetic Degeneration," by Mr. Freeland Fergus, Glasgow.

(*b*) " Sympathetic Ophthalmia after Mules Operation," by Dr. W. G. M. Byers, Montreal.

(*c*) "Relation between Muscular Imbalance and Gastric Symptoms," by Dr. Lucien Howe, Buffalo.

(*d*) " The dependence of Accommodation and Motility on the Refraction of the Eye," by Dr. H. Knapp, New York.

(*e*) "Influence of defective eyesight on the mental development of children," by Thomas A. Woodruff, Chicago.

THURSDAY, AUGUST 23—" Affections of the Lachrymal Pasages," to be opened by Dr. A. B. Osborn, Hamilton, and followed by Dr. S. Risley, Philadelphia, and Dr. Theobald, Baltimore.

(*a*) On the Treatment of Lachrymal Strieture," by Mr. Brailey, London.

(*b*) " On Accommodation after Middle Life and its Practical Importance," by Dr. Eduard Jackson, Denver.

(*c*) " Tenotomy of the Inferior Oblique as a Remedy for Some Forms of Ocular Deviation," by Dr. Alex. Duane, New York.

(*d*) " Two cases of orbital Phlegmon simulating a malignant tumor, caused by Disease of the Ethmoid cells," by Dr. Dunbar Roy, Atlanta.

FRIDAY, AUGUST 24.—" Visual Tests for Public Services,"

" Marine and Railroad Services," to be opened by Dr. T. H. Bickerton, Liverpool, Dr. Williams, Boston, followed by Dr. Allport, Chicago.

" Military Services," to be opened by Mr. Arnold Lawson, London.

" On the Work which can be performed by a One Eyed Man," by Mr. Freeland Fergus, Glasgow.

"Plastographic Tests for Binocular Vision," by Mr. Freeland Fergus, Glasgow.

(*a*) "Dislocation of the eyeball," by Dr. James Moores Ball, St. Louis.

(*b*) "Fundus Examination before Cataract Extraction," by Dr. J. P. Morton, Hamilton.

SECTION IN PAEDIATRICS.

The following subjects have been selected for discussion :

(*a*) "Congenital Pyloric Stenosis," the medical aspect being introduced by Dr. Edmund Cautley, London, and the surgical aspect by Dr. Harold J. Stiles, Edinburgh.

(*b*) "Pneumococcal Infection," introduced by Dr. Henry Ashby, Manchester.

(*c*) "Pathology of Pneumococcal Infection," by Dr. Stewart MacDonald, Edinburgh.

(*d*) "A Symposium on Entero-colitis," under the following headings:

1. "Etiology and Symptoms."
2. "Pathology and Bacteriology."
3. "Diagnosis and Prognosis."
4. "Dietetic Treatment," by Dr. J. L. Morse, Boston.
5. "Medical Treatment," by Dr. Lafetra, New York.

(*e*) "Rheumatism in Children," introduced by Dr. A. D. Blackader, Montreal.

Among those taking part in the discussion on "Rheumatism in Children" are Dr. E. W. Saunders, St. Louis.

Discussion: "On Laryngeal Stenoses in Infants," to be opened by Dr. Logan Turner, of Edinburgh, followed by Dr. Ashby, of Manchester, and others. *In joint Session with Section in Laryngology and Otology.*

The following papers will be read:

(*a*) "Prevention of the Acute Intestinal Diseases of Infants during the summer," by Dr. C. G. Kerley, New York.

(*b*) "A Study of the Absorption of Fats and Carbo-hydrates in Infants," by T. P. Shaw and Dr. L. Guilday, Montreal.

(*c*) "The Treatment of Tuberculous Abscess," by Dr. C. L. Starr, Toronto.

(*d*) "Osteogenesis Imperfecta and Allied Conditions," by Drs. Robert W. Lovett and Edward H. Nichols, Boston.

(*e*) "Spontaneous Haemorrhages in the New Born," by Dr. Allen Baines and H. T. Machell, Toronto.

SECTION IN PATHOLOGY AND BACTERIOLOGY.

The folowing subjects have been selected for discussion:

TUESDAY, AUGUST 21—(*a*) On "Pathology and Physiology of the Nucleus," to be opened by Professors Adami, Montreal, and A. B. Macallum, Toronto, and followed by Dr. Gustav Mann, Oxford, Prof. E. Wace Carlier, Birmingham, Prof. A. S. F. Grunbaum, Leeds, and Dr. H. E. Roaf, Liverpool

This will be a joint discussion with the Section in Physiology.

(*b*) "Concerning the Production of Somatogenic Cytotoxins by the Injection of Nucleoproteids," by Richard M. Pearce, and Holmes C. Jackson, Bender Hygienic Laboratory, Albany, N.Y.

(*c*) "An Antitoxin for Poisonous Mushrooms," by Dr. W. W. Ford, Johns Hopkins University, Baltimore.

(*d*) "The Application of Physical Chemistry to Serum Pathology," by Prof. W. H. Mainwaring, Indiana University.

(*e*) Dr. Robert Muir, Glasgow, will read a paper (title not received).

(*f*) "Gastric Erosions," by Dr. F. J. Smith and Dr. Miller, Pathological Department, London Hospital.

(*g*) "The urinary excretion of Potassium Iodide in various morbid conditions," by Dr. O. J. Kauffmann, Birmingham.

WEDNESDAY, AUGUST 22—(*a*) On the "Etiology and Life History of Malignant New Growths." To be opened by Prof. H. R. Gaylord, Buffalo; Dr. Clowes, Buffalo; Prof. Gary Calkins, New York; Dr. Ewing, New York, and Dr. Beebe, New York. Prof. G. Sims Woodhead, Cambridge; Prof. A. S. F. Grunbaum, Leeds; Dr. Robert Muir, Glasgow, and others are expected to take part in the discussion.

(*b*) "Some Results of the Experimental Investigation of Tumors," by Dr. Leo Loeb, Pennsylvania University, Philadelphia.

(*c*) "Investigation under the Imperial Cancer Research Fund and their Results" (with lantern demonstration), by Dr. E. F. Bashford, London.

(*d*) "The Leucoblastomata," by Prof. A. S. Warthin, Ann Arbor.

THURSDAY, AUGUST 23—(*a*) "The Forms of Arterio-sclerosis, their Classification and Experimental Production." To be opened by Prof W. H. Welch, Johns Hopkins University, Baltimore; Dr. Klotz, Montreal; and Prof. J. J. MacKenzie, Toronto, and followed by Prof. L. Aschoff, Freiburg; Prof. Leith, Birmingham; Prof. Clifford Allbutt, Cambridge; Prof. W. Beattie, Edinburgh and Dr. Robert Muir, Glasgow.

(*b*) "Fluid Crystals and their Relationship to Arteriosclerosis and other Pathological Conditions," by Prof. Adami, Montreal.

(*c*) "On the Elastic Tissue of Arteries," by Dr. Miller, Birmingham (communicated by Prof. Leith).

FRIDAY, AUGUST 24—(*a*) "Pathogenic Protozoa," by Dr. F. W. Mott, F.R.S., London.

(Acute and Chronic Changes in the Nervous System Produced by Trypanosoma Infections).

(*b*) "The Nature of Spirochaetes and the Prevention and Cure of Relapsing Fever" (with lantern demonstration), by Prof. F. G. Novy, Ann Arbor.

(*c*) "Spirochaetes and Trypanosomas," by Dr. J. W. W. Stephens, Johnston Laboratory, Liverpool.

(*d*) "On the Life-History and Cultivations of Certain Pathogenic Protozoa," by Dr. J. Ballah, Montreal.

(*e*) "The Diagnosis of Cholera Asiatica," by Dr. Armand Ruffer, Ramleh, Egypt.

(*f*) "A Beri-Beri-like Disease of the Monkey and the Pathological Histology of Beri-Beri," by Prof. R. T. Hewlett, King's College, London, together with Dr. DeKorte, London.

(*g*) "A Demonstration of Bilharzial Preparations," by Prof. W. St. C. Symmers, Queen's College, Belfast.

(h) "The Virus of Smallpox and Vaccinia," by Dr. DeKorte, London (paper communicated from Prof. Hewlett).

Contributions of great interest on other subjects are promised.

SECTION IN PHYSIOLOGY.

The following papers have been offered for this Section:

(*a*) "Muscle Proteid Immunity," by Dr. S. P. Beebe, New York.

(*b*) "The Functions of the Renal Tubules and Glomeruli," by Prof. T. G. Brodie, London.

(*c*) "Demonstration of the Sphinthariscope," by Prof. F. Gotch, Oxford.

(*d*) "Proteid Nomenclature," by Prof. W. D. Halliburton, London.

(*e*) "Structures and Physiological Functions of Amoeba Proteus," by Prof. C. F. Hodge, Worcester, Mass.

(*f*) "Differentiation of Contractile Protoplasm," by Prof. C. F. Hodge and M. F. Duncan, Worcester, Mass.

(*g*) "The Absorption of Proteids from the Intestine," by Prof. W. H. Howell, Baltimore.

(*h*) "Physiology of Renal Tubules," by Prof. G. C. Huber, Ann Arbor.

(*i*) "Blood-platelets," by Prof. G. T. Kemp, Champaign, Ill.

(*j*) "Electrical Excitation of Nerves and Muscles," by Dr. Louis Lapicque, Paris.

(*k*) "Structure and Functions of Nerve Fibres," by Prof. J. S. MacDonald, Sheffield.

(*l*) "Experimental Glycosuria," by Prof. J. J. R. MacLeod, Cleveland, Ohio.

(*m*) "A Plea for Micro-physiology," by Dr. Gustav Mann, Oxford.

(*n*) "Experimental Glycosuria," by Dr. P. Moore, Dr. M. Eadie, Dr. Spence, and Dr. H. E. Roaf, Liverpool.

(*o*) "Effect of Ions on Growth and Cell Division," by Prof. B. Moore, Dr. E. Whitley, and Dr. H. E. Roaf, Liverpool.

(*p*) "The Functional Significance of the Convolutional Pattern in the Primates," by Dr. F. W. Mott, London.

(*q*) "Chloroform Anæsthesia and a Simple Method of Estimating Chloroform," by Dr. Maurice Nicloux, Paris.

(*r*) "Lock-jaw," by Prof. C. S. Sherrington and Dr. H. E. Roaf, Liverpool.

(*s*) "The Causes of Fatigue in Certain Pathological States," by Prof. F. S. Lee, New York.

(*t*) "The Physiological Action of certain Choline Derivatives," by Dr. Reid Hunt and Dr. R. de M. Taveau, Washington.

(*u*) "Acapnia as a Factor in Shock," by Prof. Yandell Henderson, Yale, New Haven.

(*v*) "The Metabolism of Kreatin and Kreatinin," by Dr. Otto Folin, Waverley, Mass.

(*w*) "The Preservation of Frogs for Physiological Purposes," by Prof. Westley Mills, Montreal.

(*x*) "A Vago-Oesophageal Reflex," by Dr. S. J. Meltzer, New York.

(*y*) "The Various forms of the Negative or Physiological Venous Pulse," by Dr. W. S. Morrow, Montreal.

(*z*) "Chemical Studies on Growth," by Prof. Lafayette B. Mendel, Yale, New Haven.

(*z*1) "On the Point of Action of Drugs on the Heart," by Dr. A. J. Carlson, Chicago.

Papers are also promised by the following: Dr. P. T. Herring, Edinburgh; Dr. F. G. Hopkins, Cambridge; Dr. Suthland Simpson, Edinburgh; Prof. Jacques Loeb, Berkeley; and Dr. P. A. Levene, New York.

Discussion: 1. (With Section on Pathology, Tuesday) "On the Physiology and Pathology of the Nucleus."

2. (With Section on Medicine, Wednesday) "Over Nutrition and Under Nutrition, with Special References to Proteid Metabolism in Health and Disease," to be opened by Prof. R. H. Chittenden, New Haven.

SECTION IN PSYCHOLOGY.

The following subjects have been selected for discussion:

TUESDAY, AUGUST 21—(*a*) "Reflexes among the Insane," by Dr. Daniel Clark, Toronto.

(*b*) "The New Psychology," by Dr. Schofield, London.

(*c*) "Cerebral Localization in the Study of Psychatry," by Dr. C. K. Mills, Philadelphia.

(*d*) "Etiology of General Paresis," by Dr. A. R. Diefendorf, Connecticut.

(e) Discussion: "General Paresis," introduced by the President, Dr. Julius Mickle, London, and followed by Dr. Joseph Collins, New York; Dr. Cowles, Boston; Dr. B. Sachs, New York (Pseudo General Paresis).

WEDNESDAY, AUGUST 22—(*a*) "Methods of Staining the Central Nervous System," by Dr. Turner, Brentwood Asylum.

(*b*) "Diagnosis and Treatment of Peripheral Nerve Lesions," by Dr. Shirres, McGill University, Montreal.

(*c*) "Feeble Minded Children," by Dr. Shuttleworth, London.

(*d*) "Relation of Epilepsy to the Blood and Central Nervous System," by Dr. Turner, Brentwood Asylum.

(*e*) "Epilepsy Exhibited by Kinetoscope," by Dr. Spratling, Sonyea.

(*f*) Discussion: "Epilepsy—Psychic Fits," introduced by Dr. Alden Turner, London, Eng., and followed by Dr. Shuttleworth, London, Dr. Spratling, New York, Dr. W. G. Spiller, Philadelphia; Dr. Angell, Rochester.

THURSDAY, AUGUST 23—(*a*) "Insanity of Inebriety," by Dr. Crothers, Hartford.

(*b*) "Sterilization of Undesirable Degenerates," by Dr. Rentoul, Liverpool.

(*c*) "Types of the Devolutional Psychoses," by Dr. Farrar, Baltimore.

(*d*) "A Comparison of the Cells of the Human Cerebellum in Point of Resistance to Disease," by Dr. E. E. Southard, Harvard University.

(*e*) Discussion: "Dementia Praecox," introduced by Dr. C. K. Clarke, and followed by Dr. Adolph Meyer, New York; Dr. F. X. Dercum, Philadelphia; Dr. Shuttelworth, London.

FRIDAY, AUGUST 24—(*a*) "Application of Modern Hospital Methods to the Treatment of Insanity," by Dr. Ryan, Superintendent of Asylum, Kingston.

(*b*) "Occupation as a Factor in the Treatment of the Insane," by Dr. Mohr, Superintendent of Asylum, Brockville.

(*c*) "After Treatment of Discharged and Convalescent Cases," by Dr. Dewey, Wauwitosa.

(*d*) "Mental Processes Produced by Bodily Diseases," by Dr. Savill, London.

(*e*) "Rational Psycho-Therapeutics," by Prof. Dubois, Berne.

(*f*) "Discussion: "Mind in Medicine," introduced by Dr. Schofield, London, and followed by Pres. Hall, Clark University, Dr. Cowie, Bournemouth, and Dr. A. E. Macdonald, New York.

In addition others will take part who have not yet formally stated their subjects.

We expect also to have papers by Dr. C. L. Dana, New York; Dr. August Hoch, New York; Dr. Hattie, Halifax; Dr. Burgess, Montreal; Dr. Corning; Dr. Diefendorf; Dr. Hurd, Buffalo, and Dr. Hurd of Baltimore.

SECTION IN STATE MEDICINE.

The following subjects have been selected for discussion:

(*a*) "Protection and Control of Milk Supply."

(*b*) "Prevention of Tuberculosis."

(*c*) "Training and Supervision of Midwives."

(*d*) "Notification of Phthisis."

(*e*) "Provision and Administration of Isolation Hospitals."

(*f*) "Ioslation Hospitals and 'return' Cases."

(*g*) "Medical inspection of Children attending Elementary Schools.

(*h*) "Quarantine and Inspection of Shipping."

(*i*) "Medical Examination of Immigrants."

(*j*) "Supply of 'Water Gas'" and "Dangers of Carbon Monoxide Poisoning."

The following papers have been promised:

(*a*) "The Prevention of Tuberculosis," by Dr. Jas. Roberts, Hamilton.

(*b*) "Hygiene of the Home," by Dr. J. J. Cassidy, Toronto.

(*c*) "Tuberculosis" (in some phase), by Dr. J. H. Elliott, Gravenhurst.

(*e*) "Medical Inspection of Schools," by Dr. Helen MacMurchy, Toronto.

(*e*) "Medical Inspection of Schools," Wm. Scott, B.A., Toronto.

(*f*) "Gas Supplies, their Dangers, etc.," by A. McGill, B.A., Ottawa.

(*g*) "The State Control of Health," Dr. Jennie Drennan, St. Thomas.

(*h*) "Artificial Purification of Water Supplies," Dr. W. J. Robinson, Guelph.

(*i*) "The Protection and Control of Milk Supplies," Prof. R. Harcourt, Guelph.

(*j*) "The Protection and Control of Milk Supplies," Dr. Chas. Harrington, Boston.

(*k*) "Water Supplies from the Sanitary Standpoint," Dr. H. W. Hill, Minneapolis.

(*l*) (*a*) "Water Gas Poisoning," (*b*) "Administration Control of Milk Supply," Prof. John Glaister, Glasgow.

SECTION IN SURGERY.

The following subjects have been selected for discussion:

(*a*) "Treatment of Prostatic Hypertrophy," by Dr. Geo. A. Bingham, Toronto; followed by Mr. J. Lynn Thomas, C.B., Cardiff.

(*b*) "Treatment of Ascites secondary to Chronic Hepatitis," by Mr. Sinclair White, Sheffield; followed by Dr. Stewart, Halifax, and Mr. George Grey Turner, Newcastle-on-Tyne.

(*c*) "Ulcer of the Duodenum and its surgical Treatment," by Dr. W. J. Mayo, Rochester, Minn.; followed by Mr. George Cooper Franklin, Leicester.

(*d*) "Treatment of Acute Septic Peritonitis," by Mr. Charles John Bond, Leicester; followed by Dr. William Howitt, Guelph, and Dr. O. M. Jones, Victoria.

Among other subjects which will be discussed are:

(*a*) "Transplantation of the Ureters in Ectopia Vesicae," by Dr. Geo. A. Peters, Toronto.

(*b*) "The Surgery of Banti's diseases," by Dr. Geo. Armstrong, Montreal.

(*c*) "Intestinal Obstruction in Association with the Vermiform Appendix," by Mr. George Grey Turner, Newcastle-on-Tyne.

(*d*) "Posture as an Aid in Surgery," by Dr. Murray MacLaren, St. John.

(*e*) "Injuries to the semilunar Cartilages," by Dr. James Bell, Montreal.

(*f*) "Appendicitis," by Dr. Herbert A. Bruce, Toronto.

(*g*) Paper—Title to be selected, by Dr. Francis J. Shepherd, Montreal.

(*h*) "Surgical Treatment of Ulcerative Colitis," by Dr. Ingersoll Olmsted, Hamilton.

Arrangements are being made for the holding of a Surgical Clinic at which a number of interesting cases will be presented by members of the Association.

SECTION IN THERAPEUTICS.

Tuesday, August 21—(*a*) "The Kidney, its Pharmacology and its Therapeutics," Prof. T. G. Brodie, London.

(*b*) "The Treatment of Acute Nephritis," Dr. A. O. J. Kelly, Philadelphia; To be discussed by Dr. C. G. Stockton, Buffalo.

(*c*) "The Treatment of Uraemia," Dr. E. Lefevre, New York; To be discussed by Dr. J Caven, Toronto.

(*d*) "The Treatment of Chronic Nephritis," Dr. H. A. Hare, Philadelphia; To be discussed by Dr. Geo. Hodge, London.

Wednesday, August 22—(*a*) "Opsonines and Animal Vaccines," Dr. G. W. Ross, London.

(*b*) "The Action of Drugs in Vascular Hypertension," Dr. T. L. Coley, Philadelphia.

(*c*) "The Therapeutics of Acute Acquired Insanities," Dr. D. R. Brower, Chicago.

(*d*) "The Respective Spheres of Hygienic and Medicinal Measures in the Treatment of Pulmonary Tuberculosis," Dr. S. S. Cohen, Philadelphia.

(*e*) "The Working Bulletin System for the Collective Investigation of the Newer Materia Medica," Dr. F. E. Stewart, West Orange.

Thursday, August 23—Joint Sessions with the Section of Medicine on the Subject of "Heart-Block."

Friday, August 24—I. "The Value of Alcohol in Treatment," Dr. A. D. Blacader, Montreal; to be discussed by Dr. S. J. Meltzer, New York, Dr. R. C. Cabot, Boston; Prof. G. S. Woodhead, Cambridge, Eng.; Dr. W. H. Moorhouse, London, Ont.

II. The Place of Materia Medica and Therapeutics in the Medical Curriculum.

(*a*) "The Teaching of Materia Medica and Pharmacology," Prof. J. T. Halsey, Tulane University, New Orleans.

(*b*) "The Teaching of Therapeutics," Prof. T. McCrae, Johns Hopkins University, Baltimore.

(*c*) "The Place of Materia Medica and Therapeutics in the Medical Curriculum," Prof. C. R. Marshall, University of St. Andrews.

(*d*) "The Place of Materia Medica and Therapeutics in the Medical Curriculum," Prof. R. B. Wild, University of Manchester. To be discussed by Prof. Osborne, Yale; Prof, Hatcher, Cornell; Dr. J. M. Anders, Philadelphia.

III. The Need and the Place of Psychic Therapeutics in the Medical Curriculum. By Dr. R. C. Cabot, Boston.

GENERAL INFORMATION.

Items of Special Interest.

In the Main Building of the University of Toronto will be found:

1. An elaborate Museum of Exhibits, of Instruments, Drugs, Medical Publications, Foods, etc. Visitors will do well to inspect this exhibit carefully, and it is suggested as a suitable rendezvous.
2. In the exhibit halls will be found an interesting collection of Indian Pictures from the brush of Paul Kane (loaned by E. B. Osler, Esq., M.P.)
3. Adjoining the exhibit an
   - Information Bureau,
   - Registration Bureau,
   - Post Office,
   - Express and Telegraph offices,
   - Offices of the General and Honorary Local Secretaries, and of the Editor of the British Medical Journal.
   - Ladies' Reception and Writing rooms.
   - Public Stenographers.
4. A Restaurant (west wing and Dean's Garden).
5. Office of G. H. Webster, general viséing agent for all railroads.

The Toronto Industrial Exhibition opens on Saturday, August 25th, and continues for two weeks. This will afford an unrivalled opportunity to visitors to obtain an idea of Canadian progress in Agriculture, Manufacture, etc.

At the time of the meeting there will be held in Toronto a Tuberculosis exhibit, which visitors will do well to examine.

Members and guests attending with their motor cars will find Garage accommodation at

The Franco-British Motor Garage, the Mutual Street Rink.

The Dominion Automobile Co. (Limited), cor. Bay and Temperance Streets.

The Automobile Supply Co., 24 Temperance Street.

Hyslop Bros., 209 Yonge Street.

Excursions and Side Trips.

Excursion (limited) to Niagara Power Works, Niagara Falls, August 25th.

Excursion to Muskoka (limited), August 25th to 27th.

Excursion to the Ontario Agricultural College, Guelph. (limited), August 25th.

	Distance	Cost (Association Rate One Way
Quebec to St. John	600 miles	$13.90
Quebec to Halifax	674 "	14.86
Quebec to Sydney	826 "	18.20
Quebec to Saguenay	225 "	4.50
Toronto to Muskoka	175 "	7.06
Toronto to Niagara Falls	50 "	2.50
Toronto to 1000 Islands	216 "	5.95
Toronto to Georgian Bay	150 "	5.10
Toronto to Sault Ste. Marie	400 "	11.65
Toronto to Temagami	300 "	9.05
Toronto to Kawartha Lake	70 "	3.05
Toronto to Brampton (Dale Estate Rosaries)	22 "	0.65
Toronto to Couchiching	90 "	2.60
Toronto to Vancouver (return *via* Yellowstone Park if desired)	2,600 "	67.75

British visitors may visit all other points in Canada at *half the lowest one way first class fare going* and returning. It is not necessary to travel by the same route. The Certificate supplied by the Eastern Canadian Passenger Association and countersigned by the Secretary must always be presented. For the *transcontinental trip* both British, American and Canadian guests should notify the Honorary Local Secretaries, Medical Building, Toronto, at once, and when possible the names of groups that would like to travel together should be supplied. At present the intention is to send groups of from eighteen to twenty-five in a special sleeper on each of the regular outgoing transcontinental trains, though it is just possible that a special train be sent through as far as Winnipeg and broken up into groups there. Information regarding trips may be obtained from C. B. Foster, District Passenger Agent, C.P.R., 71 Yonge Street, Toronto; J. D. McDonald, G. T. R., Union Station, Toronto; H. F. Chafee, 2 King Street E., Toronto, Richelieu and Ontario Navigation Co; C. H. Nicholson, Northern Navigation Co., Sarnia, Ont.; Wm. Phillips, Canadian Northern Railway Co., King and Toronto Streets, Toronto; W. H. Moore, James Bay Railway Co., King and Toronto Streets, Toronto; N. Weatherston, Intercolonial Railway, 51 King Street E., Toronto.

Personals.

Dr. Ten Eyck has moved to 11 College Street.

Dr. D. H. Hutchison has removed from Ingersoll to Pt. Rowan.

Dr. E. D. Carder has commenced practice in Vancouver, B. C.

Dr. Thos. Futcher, of Baltimore, visited Toronto about the middle of July.

Dr. W. P. Caven is spending a two months' holiday on his farm near St. Mary's.

Dr. Wm. J. Brown, of Lindsay, was married to Miss Touchbourne, July 10th.

Dr. Francis J. Shepherd has been elected President of the Montreal Art Association.

Dr. G. A. Richardson, of Toronto, went to Muskoka for a month's holiday, July 20th.

Dr. Wm. Nixon, of Westaskawin, Alta., was married to Miss Bruff, of Toronto, June 12th.

Dr. Frederick C. Hood, of Toronto, started on a trip to the Eastern Provinces, July 15th.

Dr. Fred W. Marlowe, of Toronto, was married to Miss Walton, of Thorold, July 12th.

Dr. E. Herbert Adams, of Toronto, returned to his home after a visit to Japan, July 8th.

Dr. A. W. Mayberry, of Toronto, has removed from 253 Spadina Ave. to 569 Spadina Ave.

Dr. D. M. Anderson, of Toronto was married to Miss Gertrude Bell, of Washington, D.C., June 16th.

Dr. G. Sterling Ryerson is spending a portion of the summer at his summer residence, Sturgeon Point.

Dr. V. C. Thorn was married to Miss Clare McCullough, daughter of Dr. J. McCullough, July 11th, 1906.

Dr. T. S. Sproule, M.P., of Markdale, Supreme Grand Master of the Grand Orange Lodge of British America, was elected President of the Imperial Grand Orange Council of the World at the recent meeting in Toronto, July 18th.

Dr. A. B. Atherton, of Fredericton, N.B., has been elected President of the Maritime Medical Association for the coming year.

Dr. Chas. O'Reilly has commenced practice at 52 College Street, Toronto, and will devote himself chiefly to office consultation work.

Professor Morris Hutton, President of the University College, has been appointed temporary President of the University of Toronto by the Board of Governors.

Dr. Murray MacFarlane, of Toronto, went to New Jersey July 12th; after spending a few days there, went on to Quebec, and expects to return to Toronto about the middle of August.

At a meeting of the Governors of the University of Toronto held July 18th, a retiring allowance of the ex-President, Dr. Loudon, was fixed at full pay, $5,500 per annum, in accordance with the recommendation of the Government.

Obituary.

W. A. McINTOSH, M.D.

We have to announce with deep regret the death of a bright young physician, Dr. McIntosh, which occurred in Toronto July 18th. He was formerly a resident of Toronto, studied medicine in Trinity Medical College, and graduated M.D. from Trinity University in 1900. He then went to Deer Creek, Minnesota, where he soon established a good practice. On account of ill health he first removed to Cleveland and then to his home in Toronto about six months ago. He was supposed to be recovering and suddenly grew worse, and was removed to Grace Hospital, and died a few minutes after his admission to that institution.

JOHN WALLACE SLAVEN, M.D.

Dr. Slaven, of Orillia, died at his family residence July 7th, aged 71. He was born in Prince Edward County and graduated M.D., but gave up medical practice shortly after graduating and was engaged for many years in business pursuits in Orillia.

Mrs. Atkinson, wife of Dr. E. L. Atkinson, of Gananoque, died July 10th.

Dr. Robert Craik, of Montreal, who was for many years Dean of the Medical Faculty of McGill University, died June 28th, aged 77.

Selections.

SURGICAL HINTS.

A film of collodion is an excellent protective material for granulating wounds. It can be made in the manner recommended by Stuart McGuire, by pouring collodion on an aseptic glass plate, and after it has hardened carefully cutting it into strips.

In cases of greenstick fractures of the forearm it is generally advisable to complete the fracture; otherwise there is apt to be considerable deformity owing to the formation of a mass of callus on one side at the seat of fracture, destroying the symmetry of the limb.

In lacerated wounds of the hand free drainage is of paramount importance. Tissues irredeemably destroyed should be snipped away with scissors, as more can thus be saved than with the knife. In suturing the rule is few stitches and no tension. Amputation must always be the last resort.

In a syphilitic, as in a tuberculous, individual joint affections may follow a sprain, and the two conditions may resemble each other so closely that a diagnosis is very difficult. In cases of doubtful tuberculous arthritis, especially in adults, it is well to examine for evidences of syphilis and to try the effects of specific medication.

Neurasthenic persons are apt to imagine that they suffer from all sorts of diseases. If such a patient once gets the idea of having appendicitis he is very likely to develop hypersensitiveness and painful areas over the abdomen, as over McBurney's point. Given such a combination of extreme tenderness over this area with constipation and abdominal distention due to intestinal gases, and it is sometimes difficult to diagnose the case from chronic appendicitis.—*International Journal of Surgery.*

The Treatment of Diabetes Mellitus.

In the *Medical Chronicle* Williamson gives an interesting summary of the latest contributions to this subject.

M. Lauritzen, of Capenhagen, has given a useful summary (*Medizinische Klinik,* 1905, No. 39) of the results obtained by various observers with respect to the use of carbohydrate articles of food in diabetes mellitus, and has added his own valuable observations.

1. As regards the treatment of diabetes mellitus with large quantities of milk, Lauritzen concludes from his own observations that a rigid milk diet may cause the diabetic symtoms to disappear, for a time, in the mild cases, and in cases of medium severity; but a permanent cure cannot be obtained, and better results follow an ordinary rigid diabetic diet.

The milk diet, however, is of great value when certain complications are present, viz., chronic nephritis with cardiovascular changes, arteriosclerosis, with degeneration of the myocardium or aortitis, diseases of the liver, skin affections, acute febrile diseases such as pneumonia and typhoid fever.

In cases of diabetes associated with chronic nephritis, when dyspnea and edema occur, Lauritzen recommends one liter of milk and a half liter of cream daily. When improvement is obtained the quantity of milk may be diminished and a mixed diet gradually allowed.

In severe cases of diabetes when acid intoxication (acidosis) occurs, and coma is threatening, a milk diet is indicated, along with large doses of alkalies, with aperients, and cardiac tonics. When the risk of coma does not appear so great, and when dyspepsia and constipation are prominent symtoms, a mixed milk diet is better, along with alkalies and aperients.

In recent and moderately severe cases, in which there is only slight acidosis, the milk diet is not indicated.

2. The "oatmeal treatment" has been recommended by von Noorden. The oatmeal was given in the form of soup; oatmeal (Knorrs') 250 grammes, butter 300 grammes, roborat 100 grammes. A portion of this soup was given every two hours, and at the same time a little wine, cognac or coffee. The oatmeal treatment is continued for two or three weeks. Though oatmeal (Knorrs') contains 73.6 per cent. of carbohydrates the following were the results obtained by von Noorden:

In ten severe cases the tolerance for other carbohydrates

was increased, and the general condition of the patient remained the same or improved.

In a series of cases threatening coma the prodromal symtoms of this affection disappeared under the oatmeal treatment, but there was no improvement as regards the tolerance of carbohydrates. Often the oatmeal treatment caused a diminution in the excretion of sugar, but the urine did not become free from sugar.

In other cases the oatmeal treatment had no good effect; the glycosuria increased, and there was no improvement as regards the excretion of acetone and ammonia.

In mild cases, without diaceturia, the oatmeal treatment caused a diminution of the tolerance of carbohydrates.

The oatmeal treatment is difficult to carry out, it is not suitable in all cases, it requires much care, it should only be given when the patient can be carefuly watched and in a certain class of cases.

Lauritzen thinks that the oatmeal treatment is indicated when the usual dietetic treatment fails to alter the sugar excretion, when the weight is diminishing, and the signs of acidosis remain unaltered in spite of the alkaline treament.

The dose of alkalies should not be changed when the oatmeal treatment is given. In the preparation of the oatmeal soup Lauritzen recommends that the oatmeal should be boiled for a long time in water, and then the butter and vegetable albumen added. He adds 100 to 200 grammes of butter to 200 to 250 grammes of oatmeal, 50 or 100 grammes of roborat, and 2 to 6 eggs. Sometimes a portion of oatmeal was given as porridge. In commencing coma he prefers the milk diet.

3. A few years ago Mossé published a series of observations on the use of potatoes in place of bread in diabetes mellitus. These observations appear to show that some diabetic patients can tolerate potatoes better than an equivalent amount of bread.

Mossé has shown that potatoes may be employed more frequently in mild cases of diabetes than was formerly thought advisable; but in the medium and severe forms of the disease, as a rule, potatoes should not be given.

The milk treatment is of service in cases of complicated mild and severe diabetes. The value of the oatmeal treatment remains to be decided. In a few cases it has a beneficial effect on the sugar excretion and acidosis; in certain conditions, in severe diabetes, the carbohydrates of oatmeal are tolerated

and are of dietetic value. As the treatment of these severe cases is so difficult, the oatmeal treatment must be regarded as a distinct advance.

Friedenwald and Ruhrah (*American Journal of the Medical Sciences,* October, 1905) recorded the result of their observations on the treatment of diabetes mellitus with milk, with potatoes, and with oatmeal.

1. Milk treatment. The authors state that they have rarely found it advisable to place any of their patients on an exclusive milk diet, except in severe cases, in which diacetic acid is present in the urine and coma threatening. But they have utilized half a liter or a liter of milk daily in many cases, in addition to other allowable food, with excellent results. The effect of the milk should be carefully watched.

2. Treatment with potatoes. In a number of cases the authors have replaced a portion of the bread taken by diabetic patients with potatoes. They have not found any bad effects from the change. "In a not inconsiderable number of cases very beneficial results were obtained," and the change of diet was very pleasing to the patient.

3. Oatmeal treatment. The authors give a summary of the observations of von Noorden and others on the oatmeal treatment: "In a general way it may be stated that the oatmeal cure is especially useful in those forms of diabetes exhibiting diacetic acid in the urine, and that in mild forms it is not only a useless form of treatment, but may even prove harmful."

In the severe forms of diabetes the authors obtained remarkable results. In certain cases they report that it was "possible to rid the urine of sugar entirely, when this is impossible on an entirely carbohydrate-free diet (standard diet)."

In another class of cases the oatmeal diet caused both sugar and diacetic acid to disappear from the urine.

In a third series of cases the diacetic acid disappeared when the patient was placed on the oatmeal treatment, but the sugar excretion continued unaltered.

Lidwill (M. C.) (*Intercolonial Medical Journal,* Aug. 20, 1905) recommends rye bread (the pumpernickel of Germany) in cases of glycosuria occurring in old or middle-aged individuals. The rye bread contains 45 to 49 per cent. of starch, and yet the sugar in the urine diminishes when the bread is taken. The probable explanation is that the rye bread is "satisfying, and that the patients only eat a small amount of it. Also, it contains but little digestible starch, and it is laxative, combating constipation."

V. Mering points out the importance of "individualizing" the treatment of diabetes mellitus. When the perchloride of iron reaction is present carbohydrates must not be entirely withdrawn from the diet. In such cases v. Mering allows 100 to 150 grammes of bread daily and one liter of milk, and gives at the same time large quantities of sodium bicarbonate.

According to v. Mering glicerin has an injurious effect on the sugar excretion, and is little better than the carbohydrates; but saccharin and krystallose may be used for sweetening articles of food and drink

He believes that muscular exercise has a very beneficial influence, not only in the mild cases but also in the severe forms. Muscular exercise causes a diminution of the sugar excretion, but great caution is necessary in severe cases of diabetes, and overstrain must be avoided, since sudden death may occur in such cases through cardiac failure. He recommends massage in wasted patients. Residence at the seaside or in mountain districts in summer, and in a mild climate in winter, is advisable.

As regards drug treatment the sources of fallacy are pointed out. It is important to remember that everything which diminishes the appetite reduces sugar excretion.

According to v. Mering opium is the only drug which influences the sugar excretion favorably; but its effect is only temporary. In some mild cases sodium salicylate diminishes the sugar excretion temporarily.

For the itching of the skin he recommends sodium salicylate; for pruritus vulvæ the local application of orthoform ointment (10 per cent.); and for the "rheumatic" and neuralgic pains, antipyrin, phenacetine, and acetanilide.

When coma is threatening he advises large doses of alkalies, 450 to 750 grains daily of bicarbonate of soda; the rigid diet should be discontinued, and milk, bread, and soup (thickened with barley) should be given in moderate quantity. If coma should occur 750 grains of sodium bicarbonate dissolved in one liter of water (35 ounces) may be injected into a superficial vein.

Oskar Simon (*Prager med. Wochenschrift,* 1905, No.34) points out that in cases of slight acetonuria the acetone will often disappear from the urine when butter is excluded from the diet. But in other cases withdrawal of butter from the diet has not this effect. He records three cases of severe diabetes in which withdrawal of butter from the food did not check the acetonuria and diaceturia, but the addition of a

large amount of albumen in the form of Parmesan cheese (60 to 100 grammes), in addition to relatively large quantities of carbohydrate, caused the acetone and diacetic acid to disappear promptly from the urine. The patient was at the time drinking the waters at Carlsbad.

Huchard and Fiessinger (*Journal des Practiciens,* p. 710, 1905), regard alkalies, antipyrin, aspirin and arsenic as the most valuable drugs in the treatment of diabetes.

Professor Naunyn (*Deutsche med. Wochenschr.,* 1905, No. 25) gives an excelent account of the treatment of diabetes. In the dietetic treatment he forbids fruits which contain much sugar, but he allows fruits which contain only a very small amount of sugar, such as cranberries, raspberries, red currant berries, melons, oranges, green gooseberies.

He points out the importance of testing the urine with perchloride of iron for Gerhardt's reaction (diacetic acid). When this reaction (brown-red color) is present he recommends large doses of sodium bicarbonate 150 to 300 grains daily or more. He also discontinues the rigid diet and allows much milk, with a limited amount of bread and fruit. Unless the urine becomes alkaline Naunyn increases the sodium bicarbonate up to 600 grains daily. It is to his writings chiefly that we owe this useful treatment.

De Renzi (*Berliner klin. Wochenschr.,* 1904, No. 46) thinks that sodium bicarbonate is the only drug which is of service in the treatment of diabetes. In large doses, up to 600 grains daily, it often gives good results.

In the treatment of diabetic neuritis Pavy (*Lancet,* July 9, 1904) recommends first dietetic treatment to reduce the sugar in the urine. This often causes decided improvement. He also gives codeine or opium alone with the dietetic treatment, and in addition he recommends potassium iodide 5 grains and ammonium bromide 10 grains, three times a day. In obstinate cases he has obtained satisfactory results with the continuous galvanic current. When great superficial pain has been present he has found the cautious application of aconite liniment of service..—*Therapeutic Gazette.*

Diet in Tuberculosis.

Modern research has proved that the uncooked juices of meat, milk, and green vegetables contain a liberal allowance of spermin. The muscle juices expressed from red meats are relatively more rich in oxydase than those derived from proteids of the vegetable kingdom, and more easily absorbed

by the system; for the epithelial cells of the digestive tract appear to exercise something of a selective power of absorption. Cooked meat and its extractives have practically no value. The researches of Richet and Hericourt have done much to place zomotherapy on a scientific basis. To be effective, alimentation by raw meat and meat-juices must be systematic and continued, and not introduced as a mere variation in dietary to suit the passing fancy of the patient. The form of its exhibition and dosage must be regulated in the same way as we are accustomed to regulate other remedies. Absolutely fresh raw meat, freed from extraneous gristle and fat, when reduced to a pulp by passage through a mincing-machine, should be taken two or three times a day in amount varying from one-quarter to one-half pound. The flesh of hare and wild rabbits and fresh venison are also to be recommended. Lamb, veal, goose, and duck flesh are better than ordinary beef and mutton. Nitrogen retention, digestive lymphocytosos, and hæmoglobin formation, are alike increased by such treatment. Digestion becomes rapidly improved, gastro-intestinal discomfort is notably reduced, and the stools improve in character.

To overcome any preliminary distaste for raw flesh, it is well to accustom the patient by the use of oysters and raw eggs to the enjoyment of raw products. A polony sausage (prepared from raw meats four parts, cooked oddments of chicken, ham, etc., three parts, and breadcrumbs one part, finely mixed and reduced to a paste by the addition of milk and suitable seasoning) can next be tried. Once patients overcome the preliminary distaste to raw products, they eat the raw flesh with avidity and real relish. It may here be remarked that native proteids are capable of absorption without undergoing material change or conversion into albuminoses or peptones.

There can be no doubt that the serum albumin and lactalbumin of raw milk contain immunizing and protective substances similar to those found in fresh and uncooked meat-juices. The physiologic requirement that all constituents of milk must be digested before they can be absorbed into the system does not preclude the entrance into the circulation of the living ferments present in fresh, unboiled milk. Clinical experience shows that the process of absorption is more delayed and the quantity required for nourishment larger in the case of boiled, sterilized, and pasteurized milk than when milk is used in its natural state. This is because the cellular elements of milk, with the exception of the fat corpuscles, are all living cells, which retain their vitality for a considerable

time after it has been drawn from the mammary glands. The chemical effect of boiling milk is to destroy the vitality of these cells and to coagulate all their proteid constituents, notably the albuminates of fluorin and iron.. Even if it be claimed that the casein of milk is altered by contact-action of the gastric juice into peptones and albuminoses, and absorbed as such, it cannot be denied that the absorption of the serum-albumin is by osmosis. Constipation, scurvy, and rickets more often follow from the use of devitalized forms of proteids than that of proteids in a living form. In milk submitted to the process of sterilization butyric acid is not infrequently met with in place of lactic acid, and the butter-fat of milk so prepared is broken up largely in the stomach, where further supplies of free butyric acid are split off. In order, therefore, to minimize the risk of the fats undergoing rancid degeneration, boiling, pasteurizing, and sterilizing are to be avoided, except in cases where the source and age of the milk cannot be ascertained.

The main argument in favor of well-cooked food (meat and milk) is that it kills the germs present in it, and prevents the transmission of bovine tuberculosis. No one claims that the toxins of the pathogenic bacteria can thus be destroyed, or the spores of all bacteria thus killed. The chemical poisons (toxins) produced are not altered by the application of heat under 300 deg. F., whilst the immunizing and protective substances are destroyed at the temperature of boiling milk. Further, milk boiled and subsequently exposed to infection is a better culture medium for bacteria than raw natural milk.

The evidence accumulated during recent years indicates that there is a difference between the tubercle bacillus met with in the lower animals and that which affects man. The bovine bacillus, when it finds lodgment in human beings, does so almost exclusively in children under the age of eleven years, whilst the micro-organism of adult tuberculosis has been allowed to grow up under the fostering care of sanitarian and antituberculosis societies, for it is already becoming very difficult to induce intelligent laymen to forswear their religious convictions of its truth, and adopt the systemic use of raw proteid products.

The juice of raw vegetables, although certainly containing valuable ferments, and therefore preferable to cooked greenstuffs, is by no means a substitute for raw animal juices and secretions. They stimulate gastro-intestinal metabolism, reduce abdominal discomfort, and supplant the use of catharties, but, being mainly derived from plants deficient in proteids, do not

contain the immunizing substances—oxidases and katalysators—in such abundance as do the juices extracted from raw meats or even milk.

As diet is the best weapon we now have against consumption, so likewise can it be claimed that the use of raw meat products fresh from a recently-killed animal is the best form in which food can be presented for digestion and absorption.—Editorial in *Treatment.*

Mosquito Extermination.

This is another name for the prevention of mosquito breeding by obliterating the primary conditions requisite for their wholesale production. On the 11th instant the Third Annual Convention of the American Mosquito Extermination Society was held in this city, at the New York Aquarium, and supplemented in the evening by a dinner given at the Union League Club by the President, Mr. Wm. J. Matheson, in honor of several guests and Health Board officials.

At the convention it was shown that much progress had been made toward the abatement of the mosquito nuisance by a greater enlightenment of public sentiment in its favor, as evidenced through recent legislative enactments.

In the State of New Jersey, for example, where only a few years ago the suggestion of eliminating the mosquito met with ridicule, now, as a result of a more universal education and extension of information on the subject, it is reported that the State Legislature has passed almost unanimously an appropriation of $350,000, to be expended at the rate of $50.-000 per year for the diking and ditching of the great salt marshes lying adjacent to the city of Newark and about the Hackensack River. Legislation is also in progress in the New York Legislature to the same end for the benefit of New York city.

The convention adopted what it termed a " Mosquito Brief," stating in simple language the number of species of mosquitoes that inhabit marsh lands and cesspools of the United States—that they can only breed in water; that one mosquito can lay on the average three hundred eggs a day; that the life of one mosquito is about a month. The most dangerous of Southern mosquitoes is the *Stegomyia fasciata,* the natural carrier of yellow fever germs.

At the evening dinner, Gen. Fred D. Grant, of Governor's Island, U. S. army post, gave some interesting reminiscences on mosquitoes and their effect on the health of the army. He related how he had protected a division of the army located

on one side of the Rio Grande River, in a southern section of the country, from the spread of yellow fever, which had broken out in a town situated on the opposite bank. He secured funds from Washington to carry out an effective system of screening, and said as a result that not one of his men was taken with the fever. On Governor's Island, numerous relics in the shape of 15-inch-gun shells were inverted, so as to shed water instead of holding it, which had the effect of relieving locally the generation of the insects. Even upright rifle barrels were filled with sand to avoid the collection of water.

Mr. Paul D. Cravath related an interesting record concerning the relation of the mosquito to malaria. On the north side of Long Island, about thirty miles from New York, there were certain valleys and bays where the mosquito was notoriously evident. The areas were located upon a map. Another record was made as to the extent of malaria over this section, from physicians and others, and these areas were placed upon a second duplicate map. The medical map was then superimposed over the first map, and it was found the areas in both cases pretty evenly matched each other.

This record is of special interest to all boards of health, and proves most graphically how it is possible to improve the public health by the prevention of mosquito breeding.

Other interesting remarks were made, showing how marshy places by being reclaimed and converted into public parks could easily improve land valuations and at the same time become a public benefit.—*Scientific American.*

Surgical Judgment.

That qualification which of all others I think physicians admire and respect most in a surgeon is *judgment.* It is a difficult quality to describe in words; but it consists essentially in knowing whether or not an operation is required in the case under consideration, in deciding upon the best time for performing the operation, and in selecting the special form of operation to be employed. Needless to say it is a difficult quality to acquire, and it is almost an impossibility for one surgeon to impart it to another. Although it may be developed, it appears in its origin to be largely intuitional; and those who are born without it rarely become distinguished for anything beyond the mere manual dexterity with which their operations are performed. The operations performed by such surgeons may be the most brilliant success, but many of their patients are very apt to die.—John B. Deaver in *Medicine.*

THE TREATMENT OF ARTERIOSCLEROSIS.*

By DR. E. ROMBERG, Tuebingen, Germany.

Coronary sclerosis with or without sclerosis and insufficiency of the aortic valves is to be treated with digitalis, provided no serious cerebral arteriosclerosis is present. The signs of coronary sclerosis causing cardiac weakness are: Angina pectoris, cardiac asthma, severe dyspnoea, in conjunction with the signs of aortic involvement expressed by systolic aortic roughening, accentuation of the second aortic tone, and when the aortic valves are shrunken, the presence of a diastolic murmur over this area. Occasionally, an area of dulness is found over the dilated ascending aorta. Tincture of strophanthus may be used when prolonged medication is required. Digalen is of value in cases where rapid effect is desired. Full blooded, vigorous individuals, suffering with these attacks, may be put on a milk diet with digitalis for five or six days with good results. Digitalis is of value in those cases of angina pectoris where there is a disturbance of the heart's force and frequency, chiefly. It is of value in all cases of cardiac asthma. Here it may be necessary in addition, to give a narcotic and stimulant at bed time for the nightly attacks of asthma. Morphine is to be used only where absolutely necessary. Codeine or dionine and nitroglycerin are valuable in this connection, the last named often being prophylactic. Frequently, abdominal fulness and distress are present in plethoric cases, and should be treated by catharsis and digitalis.

Interstitial nephritis is a condition frequently met with, and here digitalis and its congeres are often of value, but its administration requires more care and should be combined with diuretics.

Carbonated baths at 92 to 95 degrees F. are of value in mild cases of arteriosclerosis, but not good for severe cases or extremely nervous cases.

Gymnastics must be carefully graduated and watched. When so given, great benefit is to be had. Otherwise, more harm than benefit accrues.

Cerebral arteriosclerosis gives rise to a feeling of fulness and heaviness in the head. The patient wakes earlier than usual, frequently with a feeling of great anxiety and precordial distress. During the day these attacks may come on resembling pseudoangina pectoris. Vertigo and digestive disturbances may arise. Mental activity and memory diminish and a change in disposition is noticed. These various neurasthenia-like symp-

*Abstract from the Deutsche medizinische Wochenschrift, 1906, No. 5. By Meisenbach.

toms arising beyond the fortieth year point to vascular degeneration and not to neurasthenia.

The treatment requires rest, regulation of diet, vacation. Plenty of water by day except in cardiac insufficiency with oedema, where the fluids must be restricted.

The appearance of psychical disturbances is of sinister import, such cases belong in an institution.

Visual disturbances are met with in arteriohæmorrhage and thrombosis of the arteries or veins.

Vomiting tympanites, constipation and abdominal pain are met with in arteriosclerosis of the abdominal vessels. In these cases, small doses of opium or atropine may give relief. Thrombosis of the mesenteric vessels and gangrene of the bowel elude positive diagnosis and are fatal.

Vascular neurosis: Intermittent claudication, Raynaud's disease, acroparaethesia, and erythromelalgia are met with often as expressions of arteriosclerosis. These vascular neurosis should be treated by quieting agents.

The general treatment of arteriosclerosis bases itself on the administration of potassium iodide. It is of greatest value in the neurasthenic type of manifestation. Organic changes are probably not influenced by it. This remedy is not to be used in arteriosclerosis complicating Basedow's disease.

Potassium iodide should be given in doses of 2 to 5 grains five times a day, for two to three years with pauses. As suggested by Lauder Brunton, sodium bicarbonate, potassium nitrate, and sodium nitrate, taken in a pint of water on the empty stomach on rising may be used during the pauses.

Rest is essential. These persons should undergo a diet regimen and only those living exclusively sedentary lives should resort to exercise for reduction of the body weight, and then only if the disturbance is not great. Sleep is essential. Elevations of 1500 to 4000 feet are the best suited for these sufferers, the lower elevation named being appropriate for those suffering from cardiac insufficiency. Lukewarm salt baths are of value. Hot and cold baths are not to be used by arteriosclerotics. Tobacco, alcohol, tea, and coffee, in moderate amounts, are not harmful, except in very nervous or easily excitable persons. Any serious accident in these cases, such as apoplexy or anginal attacks, etc., of course, demands avoidance of these agents except in vital indications.

Mixed diet with moderate amount of meat, condiments, and considerable fluid is the best for the majority.

Results can be had only by persistence and careful attention over a long period.—A. E. Meisenbach in *St. Louis Medical Review*.

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ADDRESS IN MEDICINE.

BY SIR JAMES BARR, M.D., L.R.C.P., F.R.S.E.

Senior Physician to the Liverpool Royal Infirmary; Lecturer on Clinical Medicine, Liverpool University.

THE CIRCULATION VIEWED FROM THE PERIPHERY.

There are numerous treatises on diseases of the heart and aorta, but until recent years a careful study of the peripheral circulation has been largely left to physiologists and pathologists.

I have previously asserted that diseases of the heart most frequently arise from causes acting on the periphery, and hence there is here no room for specialism. The man who only studies the circulation with the aid of a stethoscope is a positive danger to society.

The capillaries through which the interchange of nutritive pabulum and gases takes place between the blood and tissues, play a most important rôle in the animal economy. Yet they have received very inadequate attention from clinicians. They constitute a vast filter bed for conveying nutritive material and oxygen to the tissues and for removing waste products therefrom. These little vessels are of extreme tenuity and delicacy, consisting of a single layer of endothelium, yet they are much stronger than most people imagine, and are capable of standing considerable internal pressure.

The capillary bed is a vast territory which pervades every tissue and organ of the body, and so numerous are these little vessels that it would be difficult to stick the point of a needle in any vascular area without wounding one or more, but in neurotic individuals you may wound many such vessels without drawing blood. In very plethoric individuals and in cases of polycythae-

mia, the capillaries of the body are fairly replete, but in ordinary mortals, especially in those of neurotic temperament, perhaps not a third of the capillaries are full at any one moment. Apply a sinapism to a very pallid skin, and you may wonder where all the turgid capillaries have sprung from. From the fact that under normal circumstances a sufficient quantity of blood cannot get through the arterioles to keep the enormous capillary bed full, the lateral pressure and the velocity in the capillaries are ever-varying quantities. The higher the potential in the arteries the greater the velocity in the capillaries, but as ths arterial potential is induced by obstruction to the outflow, the velocity in the arteries will be diminished. As Leonard Hill appropriately says: "The circulation of the blood follows certain definite laws; unfortunately, the conditions of the flow are so complicated that these laws remain for the most part undetermined. A viscous fluid driven by an intermittent pump which circulates through a system of branching elastic tubes of varying capacity; a system of tubes into and out of which passage of fluid takes place either by osmosis, filtration, or secretion; a fluid which varies in viscosity, a pump which varies in force, and tubes which have an ever-changing diameter and co-efficient of elasticity."

In a paper on tubal nephritis published in 1883, and in one on the pathology and treatment of dropsy in 1886 I dealt with the capillary circulation. I have long been in the habit of estimating the velocity by compressing the blood out of the capillaries in a given area and then watching the quickness or velocity of the return. This has served, and still serves, my purpose, but when I wish to record my observations I use a glass rod 10 millimetres in diameter. With the flat end of this rod I compress the capillaries, and then with a stop watch recording fifths of a second I time the period of the return of the blood. If you divide the radius of this rod (5 millimetres) by the time, you get the velocity per second. For these observations you must select some spot where there is a network of capillaries which you can completely empty, such as those in the back of the hand or finger, and you must also choose a spot where the return current flows from all parts of the circumference.

The study of the lateral pressure and velocity of the blood in the capillaries is an exceedingly interesting one. A combination of these two forces represents the energy of the blood in the capillaries, and no doubt this energy is derived from the heart, and stands in direct relationship to the force of the cardiac contraction; the greater the force of the cardiac output the greater will be the energy in the capillaries, but the component elements of this energy—lateral pressure and velocity—need not bear any

direct relationship to those respective elements in the arteries. These two conditions (velocity and pressure) might be said to stand, within certain limits, in an inverse ratio to one another, the more rapid the flow, the less the lateral pressure, and vice versa. The lateral pressure depends on the statical condition of the blood, and just in proportion as you introduce movement you convert the force of pressure into that of velocity.

The capillary pressure in the foot even when immobilized is often less than that in the hand, and much less than that in a grog-blossomed nose. This is entirely due to the wonderful mechanism of the vasomotor system. Some people are very liable to cold feet in bed, and such appendages to a lady seem to have led up to a divorce in the United States of America. In such cases the part may be fairly comfortable before going to bed, but once the horizontal posture is assumed the arterial pressure and capillary velocity fall, there is not a sufficient amount of fuel carried to the extremities to keep the large cooling surface warm. Here the defect is in the initial energy, and besides improving the general arterial pressure it would be advantageous to keep the feet much lower than the head and shoulders. Possibly if the lady had been under medical treatment she might have conserved her own comfort, preserved the affection of her husband (though she might not have thought the affection of the brute worth preserving), and saved the notoriety of the divorce court.

The velocity of the blood in the capillaries is, if possible, even more interesting than the pressure. It varies enormously in different individuals under different conditions. As I have before said, the range of my observations has been from less than 0.5 to 25 mm. per second.

When the velocity in the capillaries is reduced to one millimetre or less per second, the blood becomes surcharged with carbonic acid, and the skin or organ supplied becomes of a dusky hue. This appearance immediately disappears if you increase the capillary velocity; for example, when the hand is blue and passively congested from cold, or the so-called local asphyxia, if you let it hang down you increase the velocity, and you quickly see bright red spots intermingled with surrounding lividity, and soon the color of the whole hand improves. In the cold livid dependent hand the color of the fingers is better than that of the back of the hand. When you get cardiac failure, with or without any obstructive lung disease, you frequently see the upper part of the body and the hands quite dusky, while the legs and feet, which are at a lower level, may be pale. In one marked case of cardiac failure where the upper part of the body was livid, I saw one foot and part of the leg in a state of local syncope and as

pale as marble. These patients do not require a cylinder of oxygen, with which they are frequently plied, but the judicious application of a little common sense, such as the intravenous injection of small doses of adrenalin or some cardiac tonic. In cases of Raynaud's disease the local syncope is ascribed to vasomotor spasm, but really the spasm, if it exist, is a very mild affair. In these cases the arterioles shut down because there is not sufficient blood pressure to keep them open. The arterial pressure is always low, and the blood is deficient in lime salts and viscosity. In the case of local asphyxia the arterioles are not closed, but the arterial potential is low, the velocity in the capillaries is defective, and the vis viva is not sufficient to drive on the blood stagnating in the veins. In cases of erythromelalgia the reverse happens; the velocity and pressure are both increased in the large engorged capillaries.

In many cases of pneumonia with low blood pressure, the vasomotor taps in the splanchnic area are all open, and the aorta is drained before it terminates in the iliac arteries; the bulk of the blood is retained in the chest and abdomen, and the quantity supplied to the lower limbs is diminished. Moreover, the extremities are often colder than the body, and the arteries contracted. The lower level of the limbs increases the velocity in the capillaries and veins, and consequently the capillaries of the foot and leg are often blanched and the veins comparatively empty when the upper part of the body appears congested and purple.

Viscosity of the Blood.

The viscosity varies greatly, and is no doubt the great cause of resistance in the capillaries. Normally it is about five times that of distilled water. In many diseases the viscosity is nine or ten times that of distilled water. The coefficient of viscosity in the tarry blood of Asiatic cholera is often so great that it will not pass through the capillaries. It has long been a disputed point as to whether the resistance to the arterial flow, and consequently to the heart, is situated in the capillaries or arterioles. Sir. W. H. Broadbent, I believe, even now throws the weight of his deservedly great name in favor of the resistance being in the capillaries; and in cases of vasomotor paralysis no doubt such is the case, but in ordinary circumstances I agree with the majority that there is an earlier barrier to the outflow from the heart in the arterioles and small arteries which are governed by vasomotor nerves.

It is extremely fortunate that there is this first line of defence created by the action of the vasomotor nerves in the small arteries

and arterioles, because if this were wanting, as at present constituted we should either have to go about on all-fours or constantly run the risk of fatal syncope. Moreover, the blood would gravitate into the most dependent parts, the cooling surface would be enormous, the capillary velocity would be diminished, the blood would become surcharged with CO , and we would become cold-blooded animals. When the vasomotor nerves of a rabbit are paralyzed it appears all right until you suspend it by the ears, and then it immediately dies. The arteriolar resistance saves us from such risks.

In the second line of resistance there is a greater transformation of energy. If there be very little resistance in the veins a large proportion of the kinetic energy is carried right through to them, but as far as the resistance to the outflow has to be overcome the velocity is converted into pressure. There is considerable waste or rather transformation of energy in overcoming resistance and in producing filtration pressure. In these small tubes there is an enormous amount of surface friction. The resistance is directly as the length of the tube and inversely as the square of the sectional area; directly as the square of the velocity and inversely as the fourth power of the diameter. It also varies directly as the viscosity. The extravascular pressure is about one-fourth of the capillary pressure from which it is derived, and is an important force in carrying on the lymph circulation.

The Interchange of Material Through the Capillary Walls.

There are some physiologists who would raise the endothelial cells of the capillary walls to the high level of secreting structures, not that they have any evidence, either from analogy or otherwise, in support of such a contention, but simply because they think that the physical properties of diffusion, osmosis and filtration cannot account for the phenomena. They hold that the capillary pressure is low, and is more than counterbalanced by the endosmotic equivalent of the albumen and salts in the blood. When they recognize the enormous variation which takes place in the pressure and velocity of the blood in the capillaries, they will have less difficulty in admitting the problem of filtration as applicable to the capillary circulation. Moreover, the capillary walls do not form a semi-permeable membrane, but are just as easily permeated, caeteris paribus, in one direction as in the other. In a network of capillaries the pressure must necessarily be higher in the efferent or distributing vessels connected with arterioles than it is in the afferent or collecting tubules which unite to form the venules. You can thus have filtration and absorption going on side by side, just as in a hole in the wall

divided by a midriff you can have strong currents of air flowing side by side in opposite directions.

The interchange of gases which are in solution readily takes place by the process of diffusion; and osmosis must play a very important part in transudation and absorption according as the osmotic equivalent is greater on one side than the other of the capillary membrane. In 1886, when dealing with the pathology of dropsy, I said: "Fluids pass very readily through organic membranes, such as the walls of the capillaries, by a process of osmosis, but albumens do not thus readily transude. Unlike the capillaries of the lungs and kidneys, the systematic capillaries allow albumen to pass through their walls, so that it is found in all the intercellular fluids. Now, if it does not pass through by osmosis, we must suppose it to be filtered through under varying amounts of pressure. In filtering under pressure, as a rule, the greater the pressure the greater the amount of the filtrate, but the composition of the latter differs very materially from the nature of the compound fluid submitted to the pressure, as the different constituents pass through with varying degrees of ease, the water passing through much more readily than the albumen. Hence, although the total amount of albumen passed through may be increased according to the quantity of the filtrate, its percentage is diminished. Hence, the greater and more rapid the production of dropsy—if there be no increase in absorption—the less the relative amount of albumen." Runeberg in 1882 expressed similar views when he maintained that the concentration of a colloid filtrate is greater at lower than at higher pressures.—Abstracted from *British Medical Journal.*

ADDRESS IN SURGERY.

By SIR VICTOR HORSLEY, F.R.C.S., F.R.S.
Surgeon to University College Hospital, and to the National Hospital for the Paralyzed and Epileptic, Queen Square.

On the Technique of Operations on the Central Nervous System.

In considering in what way I could best fulfil the extremely honorable and at the same time responsible duty of delivering the Address in Surgery on the occasion of such a meeting as this, it occurred to me that exactly twenty years had elapsed since I showed at the annual meeting of the Association at Brighton the

first three patients upon whom I had operated at Queen Square Hospital for intracranial disease.

I intend to-night to analyse my cases at the National Hospital, Queen Square, and facts which we have gained therefrom since 1886, while from my experience at University College Hospital and in private practice, I shall quote only such cases as are unique, or particularly demonstrate certain points.

I must first briefly allude to the responsibility of the surgeon in the treatment of diseases of the central nervous system. As in all special branches of medicine and surgery which are in a process of evolution, it is not easy to assign credit or blame when the course of treatment pursued is respectively successful or unsuccessful; but so long as our powers of diagnosis remain as imperfect as they are, so long will the vulgar error of regarding surgical treatment as a dernier resort be committed. This question, namely: When should medicinal treatment be given up and operative treatment substituted? has been raised again and again and hotly discussed in connection with many diseases, notably appendicitis.

Dr. Allan Starr, in his well-known work on "Brain Surgery," formulated the conclusion that the surgeon should be invited to consultation in the case after about three months' medical treatment had been unsuccessful. Although such a course is in general the practice at the Queen Square Hospital, this view of the situation unfortunately has not yet been discussed in the profession. Even in the present year I have been asked to operate on a patient with a lateral tumor of the cerebellum who had been known to have optic neuritis for nine years, and last year I did operate on such a patient who had been known to have optic neuritis for thirteen years.

Palliative Surgical Procedures.

It is a prominent characteristic of intracranial disease that (1) it is liable to produce optic neuritis, which customarily ends in total blindness; (2) it may concomitantly cause severe headache and vomiting, all of which symptoms are dependent upon pressure, and can be completely palliated or wholly removed by making a sufficiently free opening in the skull and dura mater.

The first of these, namely, optic neuritis, is a condition which, owing to its causing blindness, is of such vital importance to the interest of the patient, and so to the community, that it merits full attention. In 1886 its pathological causation was a matter of acute controversy, but we learnt by a very few years of operative surgical experience that, whatever other factors might be concomitant, the most important one in the production of optic

neuritis was in rease of the intracranial tension, and thus it happened that our earliest experience was the strikingly rapid subsidence of the optic neuritis when the skull and dura were opened. Therefore, it is now possible to dogmatize on this question, and to say that in no case of optic neuritis (not of course of toxaemic or anaemic origin) should the process be allowed to continue after it has once been diagnosed, and that if blindness results therefrom the responsibility is very heavy on any one who fails to advise such a simple proceeding as opening the dura mater. The gravity of this responsibility does not seem to be generally recognized, and it is owing to this, as well as to the backward state of neurological diagnosis, that melancholy cases such as the following occur. A. B., lady, married, developed symptoms of cerebral tumor with acute optic neuritis, and was told by a neurologist that nothing could be done surgically. Subsequently, and after some treatment with the iodides, the neuritis subsided into complete atrophy and blindness, while the cerebral lesion gradually retrogressed. When the patient came under my observation in the spring of this year, her physical condition was apparently perfectly normal except the permanent loss of sight. This calamity would have been wholly avoided by operating to relieve the optic neuritis, even if nothing further had been attempted to deal with the lesion itself.

As regards the procedure to be adopted, my own experience is that although in rare instances the neuritis may begin to subside after even the first stage of only opening the skull, it is, as a rule, necessary to make a free opening in the dura mater to effect this purpose. One reservation must be made, that in cases where the tumor directly involves the optic tract, the specially delicate anatomical structure of the optic tract may negative the attaining of this otherwise invariable result.

In predicting what will be the condition of vision after surgical treatment of the optic neuritis, everything depends upon the care with which the ophthalmoscopic appearances of the disc are interpreted. Yellowish-white stippling, patches of exudation, or opal white atrophic changes, especially when associated with macular figures, all indicate that the secondary changes in the disc are likely to be permanent, and, therefore, in proportion to their development so the vision will be impaired, whereas when the loss of vision has been dependent simply on the swelling of the disc, then not only is the sight saved, but largely improved.

Curative Surgical Procedures.

If the operation is undertaken for the purpose of effecting a cure we have to consider (1) what is the nature of the disease, (2) what loss or aberration of nerve function it causes, (3)

whether if the lesion be wholly extirpated there will be a recovery from the disorder of function, and (4) whether any loss which may have been present before operation will be made permanent by the necessary extirpation of particular regions of the brain.

On points like the last it is evident that we cannot give a satisfactory opinion until we know precisely first what parts of the central nervous system alone contain the representation of movements or the record of sensation, and consequently of what parts does destruction entail permanent loss of function. In other words, we require to learn from the cerebral physiologist under what circumstances and to what extent can we get *compensation* of function when various parts of the cerebrum and cerebellum are destroyed.

1. *As Regards the Cerebrum.*—Apparently from the clinical records we can generalize thus far, that special motor functions cannot be restored if the whole of their cortical representation be removed. The same thing is probably also true of the special senses, and certainly is true of the hemianopic representation of sight. Succinctly stated, this amounts to the generalization that compensation is wholly impossible after the destruction of the middle level centres. The higher sensory representations and *a fortiori* the intellectual functions are, on the contrary, not permanently abrogated by the destruction of any one part of the cerebral hemisphere. The net conclusion, however, must be that as little injury as possible should be done, and no more removed than is absolutely necessary, it being always understood that this does not apply to the skull, but only to the nerve structures. The opening in the skull must always be free to allow of a proper survey of the brain.

2. *As Regards the Cerebellum.*—This question of compensatory power is of notable scientific interest when studied in the cerebrum, which is so clearly an assemblage of different nerve centres (in fact we might almost say organs), but it is no less interesting in the study of a homogeneous structure like the cerebellum, and has assumed a particular importance in the present subject because of Professor Frazier's proposal to extirpate the lateral lobe of the cerebellum in preference to pushing it side by displacement for the purpose of reaching deep-seated tumors. My own experience is against such extirpations for convenience. In fact, I regard them as an unnecessary mutilation, though quite admitting that in the process of removing a large tumor in that region the cerebellum is considerably bruised when so pushed aside. I ought to add that although I have removed a considerable number of lateral recess cerebellar growths, I have

never found it necessary to do more than compress the cerebellum aside.

As to whether there is loss of function from such displacement involving bruising of the cerebellum, I have followed up the longest surviving case that I could find in the Queen Square series, namely, one of cerebeller tumor and cyst combined, which I operated on eleven years ago, when the patient was a boy of 14. He is now a healthy young man of 25. In this case the tumor was a large one, situated in the right lateral lobe of the cerebellum, which was consequently markedly compressed, and probably the dentate nucleus of that side was also affected. The only indication of loss of physiological function that he now presents is a slight unsteadiness of the hand when he is particularly fatigued, as for instance after a long bicycle ride.

Consideration of the Details of Operative Procedure.

Perhaps the most convenient way of continuing this review of the technique and procedure of encephalic operations will be by taking the essential steps of such operations seriatim, and virtually it will be found that the fundamental purpose of every detail is the prevention of shock and the maintenance of the physiological integrity of the nervous system.

(*a*) *Previous Preparation.*

The general preparation of the patient by dieting, enemata, etc., is the same as for all operations. In a few instances I have found calcium chloride of probable service in cases where oozing from the bone or superficial tissues was to be expected, as in cases of penetrating endotheliomata of the skull.

The head and cavities in relation to it having been thoroughly disinfected for two or more days with sublimate and carbolic acid, the patient is placed on the table in such a position that, while the head is elevated to diminish the pressure in the venous sinuses, the shoulders are also slightly raised, so that the glottic respiration is not interfered with. If the operation is to be on the cerebellum, the patient is placed on his side, with the uppermost arm drawn downwards. By these simple means complete access can be gained for any operation on the encephalon without subjecting the patient to constraint which affects both the circulation and the respiration. This question of posture of the head is no mere matter of convenience to the operator, it is an extremely serious one to the patient for the satisfactory performance of the operation, and is only to be secured by having a suitable head-rest, such as the fork rest of Professor Frazier or the one I use.

(*b*) *Anaesthesia.*

Sir Victor generally uses chloroform in regulated doses, using for this purpose the "Harcourt Regulator." He commences with .5 per cent. of chloroform vapor in the air breathed by the patient, and rises in one or two minutes to 2 per cent.

(*c*) *Maintenance of the Body Temperature.*

One of the depressant physiological effects of the general anaesthetic now requires consideration, and that is the high degree of power to lower the temperature of the body, and therewith emphasize the shock of the operation. For this reason I think that all operating rooms should be at a temperature of not less than 75° F., and that the operating table should be provided with a suitable hot water bed.

The wound should be constantly irrigated, usually with a solution of sublimate of 1 in 10,000 strength, or with saline. These lotions are put into the irrigator at a temperature of 115°, and the flow is regulated at will by an assistant.

The use of the hot irrigation fluid, however, is not only to prevent cooling of the nerve centres; it also has another purpose—namely, the arrest of capillary and arterial haemorrhage. I therefore take up the question now of haemorrhage; and it is, of course, only necessary to speak on this occasion of the haemorrhage from the central nervous system itself—unavoidable haemorrhage met with in dealing with the nerve tissues.

(*d*) *Haemorrhage.*

The first general principle is the recognition of the fact that as few vessels as possible should be obstructed. Where it is necessary to remove large portions of the brain, the branches of vessels to be divided should be severed as far as possible from the trunk.

Arteries.—From time to time it has been proposed to tie the main arteries—for example, the carotid, with the view of producing a large control of the blood flow from the cerebral arteries. But a thorough consideration of the cases in which this has had to be done by reason of operative necessities has convinced me that it is a measure to be avoided as far as it possibly can be. On the whole, I cannot suggest anything better than the original plan of tying all the arteries around the lesion before extirpating it.

Arterioles and Capillaries.—It is remarkably easy to arrest capillary oozing and arteriole oozing from the brain by the simple means of hot irrigation.

Veins.—All bleeding from the veins and sinuses in bone can be immediately and absolutely certainly arrested by plugging with wax if the periosteum round the hole is completely removed.

Control of Venous and Capillary Oozing by the Use of Oxygen.

Venous bleeding as just stated, commonly occurs in association with capillary oozing, and is often very troublesome in spinal as well as in intracranial operations, especially those at the base of the skull.

This can be rapidly controlled by a single manœuvre, namely the inhalation of oxygen.

Method of Opening the Skull.

I cannot spend time on the various mechanical devices for opening the skull, but as much of the shock depends on the way in which this is effected, I must allude to the principles which I believe govern the opening of the cranio-neural tube at any point. Of these the first is that as far as possible the bone should be divided with as little vertically applied force as possible, and removed with the least possible pressure on the brain and dura beneath. After a long experience of saws, circular or straight, and trephines driven by electromoters, I find that the foregoing principle can be most quickly and readily fulfilled by first removing a trephine disc, then marking with a large saw the area to be removed, and finally cutting away the bone with large bone forceps, all traction being directed outwards. The ill effects of vertical pressure or force are particularly seen when the opening of the skull has been done osteoplastically with the use of the mallet and chisel, and as in very many cases it is not advisable to preserve the bony wall of the skull the chisel need be but rarely used.

Sir Victor then discussed the displacement of the brain which must be resorted to to reach tumors at the base, the procedures necessary for the exploration of the ventricles, and finally certain procedures in the treatment of malignant disease of the encephalon.—Abstracted from *Brit. Med. Jour.*

ADDRESS IN OBSTETRICS.

By W. S. A. GRIFFITH, M.D., F.R.C.P., F.R.C.S.,
Assistant Physician Accoucheur, St. Bartholomew's Hospital, London.

The Teaching of Obstetrics.

Such an address as I am requested to give on this occasion should, if possible, deal with some point of general importance and interest rather than of personal investigation or experience, and I can imagine none at the present time so important to the present and future members of the Association as the efforts which are being made to improve the teaching and training of our medical students in practical obstetrics. The faults of our methods of teaching are obvious to every thoughtful person. The difficulty in adequately removing the deficiencies is undoubtedly very great.

May we first consider some of the most obvious imperfections? These are for the most part due to the difficulty of providing practical clinical teaching. There is no large maternity hospital in London capable of accommodating the students of the various medical schools, for the four lying-in hospitals are primarily charities for the relief of poor women and training schools for monthly nurses and midwives.

Queen Charlotte's is the only lying-in hospital which admits medical students or qualified practitioners to its practice. The students, however, who take the month's course obtain clinical teaching and experience of a kind not to be easily obtained elsewhere, but unless the hospital is prepared to give up its principal work—the training of midwives and monthly nurses—in favor of the medical students, its 70 beds, accommodating 1,600 in-patients in the year, can only provide the necessary experience for a small number of the students of London. At the present time the practice is attended chiefly by qualified men, who, having found out their lack of experience, are glad to make use of the opportunities for instruction to be obtained there.

All the medical schools and lying-in hospitals have an extern maternity department, and in this department the students, under more or less organized supervision, attend poor women in their own homes. Even in the best organized of these maternities the supervision and instruction of the students are very inadequate, for the resident medical officer in charge of them is without that constant guidance and close personal contact with his chief which fall to his lot when working in the wards of a hospital. It is impossible for it to be otherwise, and it

speaks well for the general standard of practical common sense that so few calamities occur.

Another factor which has delayed the provision of adequate teaching in obstetrics, not only in England, but probably in other countries, is the old ingrained idea that the process of labor is a simple function of Nature, requiring for the most part a competent nurse only, and that the practitioners of obstetrics, although recognized in theory as of equal standing, are to be looked down upon in comparison with their colleagues in the other great branches of medicine and surgery. As the result of this, both in teaching and in examinations, the study of obstetrics has been relegated to a position totally unworthy of its immense importance to the practitioner and to the national welfare.

As shown in the report of a Committee of the General Medical Council, just published, it is still common in many places for students to be permitted or even encouraged to attend their maternity cases before they have had any adequate instruction in those general principles of medicine and surgery upon which the whole practice of obstetrics is based.

Another defect in the teaching is due to the fact that the lecturers frequently have had little experience in the practice of obstetrics. It is considered essential for the lecturer on medicine, surgery, or, indeed, any other special subject, to be a man of wide clinical experience, and to be in charge of wards devoted to the care of patients suffering from those particular diseases upon which it is his duty to lecture.

In obstetrics it is otherwise; the lecturer presides over no obstetric clinic and has often had but little experience. He is an obstetrician in name, not in practice. He probably does not attend twenty cases in a year. His obstetric practice is limited to the few special cases to which he may be called in consultation, and his teaching is necessarily of the book, not controlled by that wide personal experience only to be acquired by the constant observation of large numbers of cases such as falls to the surgeon, the physician, or to himself as a gynaecologist in the course of their daily work. They, however, aim at and attain a high standard of theoretical teaching, and all credit is due to the men who under these very imperfect conditions have done such admirable work as teachers and investigators.

In many of the provincial schools the lecturer is a successful general practitioner, to whom the Fates have given a large obstetric experience, but whose scientific training for this work and whose experience as a teacher may have been quite inadequate.

It is essential to have a scheme which shall place the teaching of obstetrics upon the same basis as the teaching of medicine and surgery.

It is in the first place essential that the clinical teaching be given in hospitals provided for the purpose, where a sufficient and continuous series of patients can be admitted, and they should have a large extern department where the advanced student can attend patients at their own homes. Lying-in wards in a general hospital would be equally valuable if there were a sufficiently large number of beds to ensure a regular series of patients in sufficient numbers. A small ward with a few beds is quite inadequate for routine teaching, although of great value for the admission of special cases. A large number of cases is less of a necessity than a continuous series, and I am convinced that it is of the greatest advantage to teachers and pupils that medical students be taught their duties at the same time and place as monthly nurses and midwives. If taught separately, the average student learns little of the many things every nurse knows well, and the nurse of a few months' training thinks she knows a great deal more than the doctor, and does not realize the wide gulf that separates her knowledge and practice from that of the properly-trained doctor.

Owing to the great difficulty that there is in providing the necessary funds for the maintenance and development of the existing hospitals, supported as they are by the voluntary contributions of a comparatively small proportion of the community, it seems hardly possible to expect that adequate accommodation can be provided in this manner in the near future, whether by the extension of the lying-in hospitals or provision of suitable wards in the general hospitals or by the foundation of new hospitals. All these are urgently needed, and will require the expenditure of large sums of money.

The practice of obstetrics consists of the practical application of the ordinary principles of surgery and medicine to special organs and to special conditions, and yet as stated in the report of the Midwifery Training Committee of the General Medical Council, already alluded to, in twenty-three out of thirty-seven medical schools students are allowed to attend midwifery practice before they have received even an elementary training in the principles of medicine and surgery. All obstetric physicians who have to teach know well that it is impossible to instruct such students with any enthusiasm, however willing the students may be to learn.

The action of the General Medical Council in appointing this Committee is a very important step in the right direction. The

recommendations are in the main excellent, and are now being considered by the various teaching bodies. They are—that every student be required to have conducted no less than 20 cases of labor, subject to the following conditions:

A. Before the student is allowed to conduct the above-mentioned 20 cases of labor he should be required to have held the office of clinical medical clerk and of surgical dresser; to have attended a course of lectures in medicine, surgery, and midwifery; to have during one month given undivided attendance upon the indoor practice of a lying-in hospital or the lying-in wards of a general hospital; and to have therein attended cases of labor under the direct supervision of a medical officer of the hospital. He should further be required to produce a certificate from the authorities of the hospital showing that he is competent to undertake the conduct of ordinary cases.

B. No certificate that the student has conducted the above-mentioned 20 cases of labor should be accepted unless it is given by a member of the staff of a lying-in hospital or of the maternity charity of a general hospital.

These recommendations, when they can be rendered practicable and can be enforced, will meet some of the most important deficiencies suggested in this address.

The changes indicated in Paragraph B, may be thought to inflict some hardship upon individual students, for at the present time the requisite certificate of attendance upon twenty cases of labor may be given by any registered practitioner. But it must be remembered that under the existing regulations the certificate affords no evidence that the student has received any instruction whatever, and there is reason to believe that such indeed is sometimes the case.

The regulation at present in existence which demands that the student shall attend courses of systematic lectures is also faulty, since it involves unnecessary labor to the lecturer and makes too great a call on the time and attendance of the student. This remark, indeed, applies to almost all systematic lectures as delivered at the present time, and many of us think that the time has come when the arrangements for such lectures need thorough revision. The great extent and variety of the subjects, on the one hand, and the excellence of so many of the text-books on the other, make it desirable that the greater branches of medicine and surgery be taught in sections rather than in a continuous course of sixty or eighty lectures.

In obstetrics the usual plan is to give a course of lectures extending over three months, and delivered on four or five days in the week during the summer session; this course the student is expected to attend, but it is often quite impracticable to arrange a time for the lectures which shall permit anything like the whole number of the students to attend without interfering with their other duties, and unless (as is the case in the larger schools) a tutor is appointed to supplement these lectures by classes held at short intervals, a student may get little or none of the higher instruction which it is essential for him to receive. The lecturer on his part has year after year to spend a considerable portion of the time given to his lectures in teaching the anatomy and physiology of the female generative organs, both in the normal and gravid conditions, before he can begin teaching obstetrics proper, namely, the anatomy and physiology of labor, the management of pregnancy and labor, and the science and practice of the various complications that may arise.

It is a curious custom, but apparently a common one, from the lecturers on anatomy and physiology to omit from their systematic courses the female generative organs; hence the student learns but little of female pelvic anatomy and of such a highly-important subject as the physiology of menstruation until he attends lectures on obstetrics and gynaecology.

Before attending his cases and acquiring some degree of practical acquaintance with the process of labor, the student is not in a position to appreciate or even to understand much of what he hears in a course of systematic lectures. It would be better if the instruction he received before his attendance upon labors were limited to the management of normal pregnancy, labor, and the puerperium together with such complications as are common. Instruction of this kind could well be given by the demonstrator, and would clear the ground for the lecturer on obstetrics, leaving him free to devote more time to the graver complications and more advanced work. The student also at this later stage of his career would be in an infinitely better position to appreciate the value of this advanced teaching.

Another method of instruction, and one likely to be keenly appreciated by advanced students, is the delivery of clinical lectures upon cases recently in the wards. Hitherto, owing to the absence of lying-in wards, such lectures have seldom been delivered.

Amongst the many able and learned obstetricians in London who have from time to time endeavored to raise the standard of teaching, there is probably no one to whom we owe so much as to the late Dr. Matthews Duncan. He came to London to

fill the vacant post of obstetric physician at St. Bartholomew's Hospital in October, 1877, and from the first devoted a large portion of his time and his great experience, and gradually his affection also, to his wards and his students.

His influence at the hospital may be summed up in the statement that by his teaching and example he transformed the teaching of obstetrics and gynaecology from an almost insignificant position to one of the greatest importance. This change was soon felt, not only by his colleagues on the staff of St. Bartholomew's, but by the students and junior officers who flocked to his lectures and wards to learn from his example that the practice of midwifery and gynaecology could be as noble and as full of dignity as that of the highest standards of surgery and medicine. This transformation was due not only to his learning and greatness as a teacher and to his success as a leading consultant—both of which were sufficiently recognized far beyond the limits of St. Bartholomew's and even of London itself—but also to the greatness of character which made it impossible for any one to be brought in contact with him, either in hospital or palace, without feeling that the branch of the profession which he practised was as noble and dignified as that practised by the greatest physicians and surgeons. In this respect, as in the high standard of his teaching, his example diffused itself in every direction, and it is no injustice to other great teachers of his time to say that it raised the whole standard of teaching obstetrics and gynaecology throughout London.—Abstracted from *Brit. Med. Jour.*

INTRODUCTORY ADDRESSES BY PRESIDENTS OF SECTIONS.

Section of Anatomy.

ARTHUR ROBINSON, M.D., PRESIDENT.

PRESIDENT'S INTRODUCTORY REMARKS.

THE TEACHING OF ANATOMY IN UNIVERSITIES AND MEDICAL SCHOOLS.

Human anatomy appears to have been studied at first by men of an inquisitive turn of mind, who desired to know as much as possible of themselves and their fellows. They were men of the educated class of their time, and it is not improbable that they may have hoped that a knowledge of the structure and arrangements of the various parts of the body would be of service in an attempt to meet and avoid those infirmities and diseases which they knew as the precursors and possible causes of death, just as similar knowledge enabled them to preserve and improve other mechanisms with which they were acquainted. Whether this was so or not, the knowledge gradually acquired was utilized by those who undertook the treatment of injuries and diseases of the human frame, and gradually the study of the details of human anatomy passed at first into the hands of the priesthood, who provided for the bodies as well as the souls of their flocks, and afterwards into the hands of the members of the medical profession. The treatment of the body having fallen into the hands of a special group of men, it naturally followed that they must teach the details of their profession, and, consequently, human anatomy has been taught for the most part in medical schools, and it has been taught almost entirely by medical men.

Under these circumstances, there has been danger that the science might be shorn of its wider limits and reduced to a technical level, the human body being looked upon merely as an object possessing certain definite structure and arrangements of parts which must be studied by the physician and surgeon merely for the purpose of localizing and treating diseases and injuries.

In more than one place the science has been debased to this level, and there is still a tendency in some quarters to decry any wider view and to insist that the medical student shall be taught only the technical details of human anatomy—that is, the positions, of organs and parts and their relations to each

other. Nothing could be more harmful, nothing could be more fatal to the best interests of the medical profession and the public than the general adoption of such a view. It would result in the medical man becoming a mere technician—that is, a man whose value is limited by the number of cases he has seen and treated.

Fortunately, there have always been in the medical profession many broad-minded men who have recognized that the man who has a wide knowledge of general principles is better adapted to meet unexpected circumstances than one who is merely provided with a memory of a certain number of observed facts, and luckily the opinions of our broader-minded colleagues have hitherto prevailed. The result has been, so far as anatomy is concerned, that in a large number of well-equipped medical schools and medical departments of universities the teaching of anatomy has passed into the hands of specialists—that is, into the hands of men who have spent the greater part of their lives in the study of the subject and who are enthusiasts in its teaching and study, looking upon man as the highest outcome of Nature and considering him and his relations, therefore, as worthy of the most careful study.

There are clear signs that this will be still more the case in the future. We recognize that it must be so; nevertheless, though we see that the movement is in the right direction, we must not minimize the danger which lies in the path and which will be inimical to the best interests of medical students if it is not carefully guarded against. The danger is that specialists occasionally lose sight of the practical applications of their subject and work at and teach only its more scientificially interesting features. It is a danger which exists in the cases of all subjects taught by specialists and it is one that must be carefully avoided in the case of anatomy, for the majority of the students of anatomy are, and so far as we can see, always will be, medical students, who in most cases take up the subject merely as the means to an end. The danger will be avoided if the electing bodies of teaching institutions will take care to appoint as teachers only men who have been through the medical curriculum and who understand the needs of the profession and its students, and if the men thus appionted will keep in touch with their colleagues who are practising the art of medicine and surgery. They can do that in many ways, of which one of the not least important is taking part in the meetings of medical associations, and thus keeping in touch with the general knowledge of the profession and its relationships to their own special branch, and on that account it is important that there should always be an Anatom-

ical Section at the annual meeting of the British Medical Association.

It should, however, be remembered that the object of a medical curriculum is not to turn out a finished anatomist any more than a finished physician or surgeon, for that is an impossibility in the time through which the curriculum extends. The object should be to give the men passing through the curriculum a wide knowledge of the principles on which they must rely in the practice of their profession, a sufficient knowledge of the details to prevent them making any serious mistake when they first begin to depend upon themselves, and a sufficiency of general knowledge to enable them to take their places as members of a community who are able to appreciate the interests of their fellows, and, what is not least important, an understanding of man's place in Nature and his relationship to Nature's general laws.

It should, therefore, be the object of anatomists to avoid entangling medical students in a superfluity of detail. They should insist upon a thoroughly sound knowledge of the general relations and arrangements of the more important organs and parts of the body, a good knowledge of the general principles which underlie the relationships and arrangements and the advantages derived from them. They should endeavor to make their students acquainted with the general laws of growth and development and with abnormal conditions so far as they are produced by deviations from the general laws of growth and development, and, carrying on the work done in the Biological Department, they should draw attention to man's relations to other animals in all cases where such relations are evident, and are instructive of the methods by which man has been evolved and the means by which he retains his place in the world. In addition, however, they must see that their students acquire a sufficient knowledge of the detail of the various parts of the body and their relationships to enable them to deal successfully with any emergency of daily life; but, with this exception, it is more important that the students should know the general principles upon which the various systems and organs are constructed, and those on which they are modified, than that they should memorize details which they can look up at any time, whenever necessary, in the numerous good text-books which are now at everyone's disposal.

Section of Obstetrics and Gynecology.

A. H. FREELAND BARBOUR, M.D., PRESIDENT.

PRESIDENT'S INTRODUCTORY REMARKS.

THE RELATION OF GYNÆCOLOGY TO THE WORK OF THE GENERAL PRACTITIONER.

Gynæcology holds out one hand to the general practitioner and the other to the specialist. She has her grand manner, in which, adopting the style and tools of the surgeon, she rivals him in brilliance of work; yet I am not sure but she is greater when, in the guise of the family physician, she cares for the health of the mothers and growing daughters of the community. She is equally at home with the brilliant operator and the sagacious practitioner; and when honors go round, will the greater fall to the operator in his theatre furnished with every appliance and waiting for his patient, or to the practitioner in his gig starting on a long drive across the moor?

Gynæcology as a specialty is sufficiently in evidence in the programme of work in this Section, and therefore I devote the few minutes of this introductory address to the relation of gynæcology to the work of the general practitioner.

The medical student starts with a wrong idea of gynæcology, for which the term "diseases peculiar to women" is in part responsible. Instead of applying the general principles of pathology to pelvic diseases, he thinks that these have a special pathology. He fails to recognize that apart from the peculiarities of the anatomical structures involved, and the physiological changes implied in menstruation, there is no difference between salpingitis and appendicitis, or that epithelioma of the cervix does not differ from epithelioma of the lip. The difficulties which beset clinical teaching in gynæcology send him into practice inadequately prepared to deal as efficiently with diseases of the reproductive system as with those of other systems in the female; and this insufficient equipment develops in the mind of the laity the idea that a special knowledge is required to deal with disease in this part of the body, a special knowledge as distinct from the experience which comes to a man as the result of having devoted his attention to one branch of medicine.

Now, from one point of view, there is no more reason to treat gynæcology as a specialty than obstetrics, which is admitted to be part of the work of the general practitioner. A moment's consideration will show that the great majority of gynæcological cases must be at first in the hands of the general practitioner. A

married woman expects to be treated in the first instance by the physician who attended her at her confinement, and it is for him to say when she should pass beyond his care. The examination of her case is at first in his hands, the diagnosis of her condition rests with him, and the routine treatment of chronic cases, of what we might describe as minor gynæcology, should be relegated to him.

The recent remarkable development in operative gynæcology has led to the idea that the surgical aspect of gynæcology is gynæcology itself. But this is only one side of it; it has what I might call its medical aspect also.

The term "specialty" applied to gynæcology raises the question as to what we mean by a specialty. Gynæcology is not a specialty in the same sense as mental disease, or even diseases of the eye. When a case of mental disease presents itself the practitioner at once recognizes that here is a case which does not belong to him. And the same is largely true of diseases of the eye. Specialism in gynæcology, apart from major gynæcological operations, is more akin to specialism in diseases of the heart or lung, in which, by devoting special attention to affections of one system, and gaining a wider experience in it than falls to the general practitioner, the physician has come to be recognized as an authority on diseases of a given system.

From this point of view it may be said that the way to the specialist in gynæcology passes through the domain of the general practitioner, and that the specialist is to be called in when the general practitioner recognizes that he has not the training or experience to enable him to diagnose or to treat successfully his patients. This view of the subject requires a higher standard of knowledge than he at present possesses, and we stand at the parting of the ways. Is gynæcology to be relegated to the post-graduate course, to be studied only by those who have a bias towards it? Or is it to be made an integral part of the student's training, so that at its termination he will know at least the elements of clinical gynæcology. Of clinical as distinct from systematic, which implies that every student must be taught clinically, and, when possible, examined clinically. I know the difficulties which the latter proposal implies, but from the relation of the diseases of women to obstetrical work, from the reasonable expectation of the general public, from the very nature of the case, this seems to me to be the road along which we must advance at this parting of the ways.

While emphasis has been laid on the teaching of gynæcology to the student as against its postponement to a post-graduate course, a word is necessary as to the manner of presenting it.

While taught as a specialty it should be taught in relation to medicine, surgery, and midwifery, the tripod on which the practice of medicine rests. If these three subjects were represented by three circles, side by side, gynæcology is a fourth intersecting the three. The defect in medical education at present is that each subject is taught as it is in itself instead of in its relation to the other subjects of the curriculum. If the teacher in each subject kept before him the relation of his subject to all the others the student would not be in a hurry, as he is at present, to escape from an over-burdened curriculum into general practice. He would begin to be interested in knowledge as an end in itself. At present the utilitarian, which passes readily into the mercantile, bulks too largely in his mind. Aristotle makes the important distinction between what is useful or yields revenue and what is liberal or tends to enjoyment. The study of medicine, if taken in the proper way, might become a liberal education while not ceasing to be a professional one. But I have wandered from my text. My object was to suggest to those who have to do with the teaching of this subject a method of presenting it.

There is another aspect of the same question which I would venture to lay before my colleagues who are engaged in the practice of gynæcology, and that is the necessity of taking a broad view of a case. Specialism is a peak in a mountain range and its development is subject to the same law. A broad foundation must be laid for knowledge, remembering that the height of a hill is related to the breadth of its base. Some rise, like Fujiyama, abruptly from the plain, volcanic in nature, produced by a sudden outburst of imprisoned force. Such are the geniuses of the medical profession. More usually, however, a peak is produced by a gradual process—for Nature is rarely in a hurry—which leads to its appearance as a member of a mountain chain. The specialist is slowly differentiated from his fellows like a peak in the Rocky Mountains—*Brit. Med. Jour.*

Section of Ophthalmology.

R. MARCUS GUNN, F.R.C.S., PRESIDENT.

PRESIDENT'S INTRODUCTORY REMARKS.

Gentlemen,—After crossing wide seas it is a privilege to find oneself among friends—friends who speak one's own tongue, and who are equally and simultaneously engaged in similar work. In such a meeting as is now being held in this city there must be

great advantage, and I value very highly the honor of being asked to preside over our Section.

Among the instructions I received on taking this office one is prominent, that I was not expected to give a regular address; in fact, gentlemen, you do not come here for any such purpose, but we are all met to compare notes and have our suggestions and opinions weighed, compared and criticized.

Before proceeding to our regular business, however, it is fitting that we should remind ourselves and think for a moment of the great loss that Canadian ophthalmology has sustained, since the last annual meeting of this Association, in the death of Professor Buller, of Montreal. Trained at Moorfields, he held office as house-surgeon there for a considerable time, and some of my earliest recollections of the hospital are associated with this period. Buller left there a record of good work well done. His position and his work in Montreal are known to us all, and his striking personality was familiar to most here. It seems but yesterday since he, in collaboration with Dr. Casey Wood, of Chicago, brought to our notice the effects of poisoning by wood-alcohol in a memoir that is already classical. But, apparently in full vigor, he was claimed by an insidious disease which found no remedy, and, as we bitterly remember to-day, Professor Buller is no longer with us.

It is part of my duty to draw your attention to certain rules which must guide our discussion and papers.

[The President here read the rules.]

We welcome most heartily all our visitors, and certainly not least our esteemed colleagues and professional brethren from the United States of America. We are glad that so many have been able to join us here, and in your name I invite them most cordially to consider themselves for the time being members of our meetings, with all privileges, and under the same rules of procedure as ourselves.

Section of Physiology.

PROFESSOR W. D. HALLIBURTON, M.D., F.R.S., PRESIDENT.

PRESIDENT'S INTRODUCTORY REMARKS.

PROTEID NOMENCLATURE.

In the subject I have selected for my communication I appear before you as a delegate from a joint committee of the physiological and chemical societies of England appointed to consider the question of proteid nomenclature, and of which I was ap-

pointed chairman. It is specially desirable that uniformity in terminology should be adopted by the English-speaking nations, and if our friends in France and Germany can also see their way to fall into line so much the better.

It is one's earnest hope that by such means the present confusion, which is so great a stumbling-block to writers, teachers, and especially to students, may be removed. I fear, however, that past attempts to secure uniformity of nomenclature have not been attended with very great success. Some years ago the Chemical Society in London appointed a committee to formulate nomenclature, but their recommendations have never been universally adopted by those who write and speak English. They suggested definite meanings, for instance, to certain terminations; for example, *ol* is the affix selected for alcohols, *ine* for basic substances, *in* for materials of more indefinite structure. Yet we still see leucine and choline spelt without the final *e*, and gelatin with it. In America, where we should have anticipated some amount of support, the old non-conforming conscience has asserted itself, and the tendency there has been in the direction of Germanizing rather than Anglicizing chemical names; creatine is spelt kreatin, sulphur appears as sulfur, and the final *e* in chloride, sulphate, and other salts, is usually absent. There is no harm in the phonetic replacement of *ph* by *f*, or of the hard *c* by *k*, but the words chlorid, bromid and bromat strike the conservative Englishman as being neither euphonious or rational.

The object of the committee's recommendations has been as far as possible to retain existing terms, and to reconcile the way in which they are employed in Great Britain, America and the Continent of Europe. An initial difficulty met the committee in the selection of the general name for the whole group. The term "proteid" used for it in England, is restricted to a sub-group (the conjugated proteids) by the Germans. The word "albuminoid," still employed by analytical chemists in England, and also by French physiologists in the same sense, is in Germany and also by German physiologists restricted to the heterogeneous group, of which gelatin and keratin are instances. The word "albumin" is fairly universally bestowed on a sub-group; its adoption as a family name would make the present confusion worse, and there is no adequate English translation of the homely German term "Eiweissstoff."

After much debate the word "protein" was recommended as the general name. It is at present so used in America and to some extent in Germany (*Proteinstoffe*). This word has the advantage of admitting of the derived words, "protease," "protcose," etc., and it has, after all, the ring of familiarity. We have therefore suggested the abolition of the term "proteid."

The sub-classes, beginning with the simplest, would be as follows:—

1. Protamines.
2. Histones.
3. Albumins.
4. Globulins.
5. Sclero-Proteins.
6. Phospho-proteins.
7. Conjugated proteins.
   (*a*) Gluco-proteins (for example, mucin).
   (*b*) Nucleo-proteins.
   (*c*) Chromo-proteins (for example, hæmoglobin).

For classes 3 and 4 (albumins and globulins) a general term would be advisable, especially from the teachers' point of view. We have not been fortunate enough to find one which would prove acceptable.

For class 7 we still retain the double-barrelled expression "conjugated protein," mainly because we were not sufficiently lucky to hit upon a single descriptive word. The term implies that here we have to deal with substances in which the protein molecule is united to a prosthetic group. We have ruled out of this class the vitellin-caseinogen group and put them in a separate compartment labelled "phospho-proteins" (class 6). the prefix "nucleo-" frequently used in relation to these substances is incorrect and misleading.

The new word "sclero-protein" replaces the word "albuminoid" (gelatin, keratin, etc.) as employed by English and German physiologists. The prefix indicates the skeletal origin and often insoluble nature of its members.

Coming next to products of protein hydrolysis (a term preferable to proteolysis), the committee recommend that these be classified as follows:—

1. Infra-proteins.
2. Proteoses.
3. Peptones.
4. Polypeptides.

Infra-protein replaces albumin*ate* (acid-albumin, alkali-albumin). The termination *ate* implies a salt and so is objectionable. These first degradation products are obtainable from both albumins and globulins, and after much consideration the committee recommend the prefixing of "infra" (or possibly "meta," which some prefer) to the word "protein" as an indication of comparatively slight chemical alteration.

The term "proteose" includes albumose, globulose, gelatose, etc. The sub-division of these into proto-, hetero-, deutero-pro-

teoses, etc., and the various modifications of Kühne's original classification were considered by the committee, but they have wisely determined that at present the whole matter is in too unsettled a state for any final nomenclature to be proposed.

The household word "peptone" is not likely ever to disappear from chemical literature. We, however, propose that it should be restricted to those further products of hydrolysis which cannot be salted out from solution, but which nevertheless still give the biuret reaction.

In the course of the discussion on this subject we were confronted with the discovery that there are certain vegetable proteins which have hitherto been regarded as peptones which do not give the biuret reaction. It seems impossible at present to bring exceptional substances of this kind into any general classification, and the same is true for those curious vegetable proteins, such as gliadin, which are soluable in alcohol.

The polypeptides are still further on the down-grade, though most of those we are acquainted with are the synthetical products of amino-acids which Fischer has prepared. They do not as a rule give the biuret reaction, but their exact relation to the peptones is still undetermined.

In conclusion, the committee considered a few special cases of terminology. They had, for instance, some difficulty in assigning to fibrin its proper place in their classification, but ultimately put it among the derivatives of globulins, for its mother substance, fibrinogen, is a member of that group.

They had no difficulty about caseinogen and casein, and strongly urge the continued use of these words in the sense now employed in the majority of English text-books, that is, caseinogen for the principal protein of milk, and casein for its coagulated condition brought about by the rennet ferment.

In the case of the muscle proteins they are equally unanimous that the original terms, of which I am the unhappy parent, should be adhered to. The new words introduced by v. Fürth have only produced confusion, especially among students. The terms to be adopted should therefore be "paramyosinogen" and "myosinogen" for the proteins of the muscle-plasma, "soluble myosin" for v. Fürth's soluble myogen-fibrin, and "myosin" for the final product.

I am quite aware that it will not be easy in a meeting like this to adequately discuss the numerous points raised; the present occasion must be regarded rather as a preliminary feeler on the question, and we propose to submit the matter to various societies of physiologists, among others to the American Physiological Society for careful consideration and report.—*Brit. Med. Jour.*

Section of Surgery.

SIR HECTOR C. CAMERON, M.D. (Glas.), PRESIDENT.

PRESIDENT'S INTRODUCTORY REMARKS.

Gentlemen,—I congratulate myself, and still more I congratulate you that, by request of the Executive of the Association, the Presidents of the various Sections will abstain from delivering any formal addresses in opening, this morning, the business of their respective Sections. I recognize fully the wisdom of this decision and most willingly bow to its requirement. But I feel that I should ill requite the kind favor which has placed me in the honorable position I occupy, and should do but scant justice to my own feelings were I not now, in a single sentence, to say to you how very greatly indeed I appreciate the distinction thus conferred upon me.

It is a high honor, under any circumstances, to be invited to fill such an office. But I cannot help thinking that both the interest and the sense of honor attached to it are greatly enhanced when the Association, deserting its ordinary home circuit, justifies its imperial character by accepting an invitation to visit one of the chief cities of the Greater Britain across the seas—one of the most important centres of this great Dominion of Canada.

We who practise our profession in Great Britain and Ireland are never forgetful of the great and daily increasing debt which surgery owes to those who cultivate its science and art on this side of the Atlantic; and we therefore naturally look forward with keen anticipation to the benefits which cannot fail to accrue to all of us from the instructive and valuable intercourse which we shall have here with our Canadian brethren, as well as with those American surgeons who will do us the honor of attending our meetings.

You will perhaps here permit me to offer to the latter a most hearty and fraternal welcome. We trust they will take a full share in all our discussions, giving us the benefits of their experience and of those opinions which they are so well qualified to express on the various important and interesting subjects which are to be brought before us. These subjects constitute, I think, a promising programme, provided and arranged for us by the zeal and industry of our Secretaries.

With their continued assistance, as well as with the countenance and help of the Vice-Presidents of the Section, I hope to be able so to guide and regulate the business that our meetings

may prove—what I am sure they can hardly fail to prove—a source of the highest interest and value to all of us.

Without further preface, gentlemen, I invite you to proceed with the work of the Section.—*Brit. Med. Jour.*

Section of Therapeutics.

DONALD MACALISTER, M.A., M.D., D.C.L., LL.D., F.R.C.P., PRESIDENT

PRESIDENT'S INTRODUCTORY REMARKS.

AN IMPERIAL PHARMACOPOEIA.

First, let me express the pleasure which we who come from the Old Country feel in meeting once more on Canadian soil. We remember the impulse to corporate expansion, the realization of our Imperial responsibilities as a profession, that came to us when the Association met at Montreal. The force of that impulse is still felt among us. It was good, it *is* good, for us to be here; not only that we may meet face to face with those of our kinsmen beyond the seas whose names are associated in our minds with good work ably done for the advancement of our common science, but also that we may be braced by breathing your larger air, and by coming into closer touch with your strenuous vitality.

In the second place, I would seize the occasion to say a word on behalf of the *British Pharmacopoeia.* As chairman of the committee that is charged with the preparation of our national medicine-book, it is not inappropriate that I should seek to interest this Therapeutic Section, and particularly the Canadian members of it, in our work for the profession. The time for the next revision is approaching, and we desire to make the new book a better expression of our ideal than has hitherto been practicable. Forty years ago the Medical Council declared that in the *Pharmacopoeia* it desired "to afford to the members of the medical profession and those engaged in the preparation of medicines throughout the British Empire one uniform standard and guide, whereby the nature and composition of substances to be used in medicine may be ascertained and determined." In 1898, with the help of the medical and pharmaceutical authorities throughout the British dominions, the first effective steps were taken to produce a work adapted to the general and the local requirements of all parts of the Empire. Our efforts were materially aided by a Canadian committee, under the leadership of Dr. Blackader, one of your Vice-Presidents. In the *Indian and Colonial Addendum* of 1900, a further step was taken to meet the

needs of particular localities outside the United Kingdom. Medicinal plants and other substances which had been suggested for inclusion by colonial authorities, but which were little known and little used at home, were therein dealt with, and official sanction was given to their local employment. At the instance of the North American colonies such additions to the materia medica as couch-grass, arnica, cotton-root bark, grindelia, black haw, wintergreen, sesame oil, and turpeth were introduced, and suitable preparations containing them were described. But it was added that "with regard to the sources, preparations and properties of some of these drugs, further investigation, especially in the countries in which they are found, is much to be desired." And a hope was expressed that their official recognition would conduce to research of this kind.

Since that date the new United States *Pharmacopoeia* has been issued (1905). The British committee has observed with gratification that it exhibits a marked tendency to uniformity with the *British Pharmacopoeia,* and that it includes just such information about some of the "North American" drugs of the *Addendum* as was desired. It also embodies the conclusions reached by the International Congress on Pharmacopoeial Unification, which, with Professor H. C. Wood, I was privileged to attend as the Government delegate at Brussels in 1902. These conclusions have now been ratified by an international agreement between the various pharmacopoeial authorities of the civilized world, and have already been observed in framing the new pharmacopoeias of Austria, Holland, Belgium, Spain, and the United States. I need not say that they will also be embodied in the next *British Pharmacopoeia.* They refer solely to the unification of the strengths of drastic or poisonous drugs and preparations. They seek to secure that throughout the world medicines which bear the same name, and whose potency demands that they shall be used with cautious precision, shall mean the same thing, and shall possess the same determinate strength.

Differences of tradition and environment will long preclude the complete harmonization of the numerous national pharmacopoeias; but no such differences stand in the way of adapting the *British Pharmacoepoeia* to the needs of all the nations and peoples that are included within the world-wide dominion of Greater Britain.

May I therefore take advantage of my temporary position to say that without Canadian co-operation we must fall short of our ideal? The new *Pharmacopoeia* will be condemned to antenatal mutilation. Might not a representative committee be formed under the auspices of this and other medical associations

of the Dominion for the purpose of formulating your special requirements, and of affording us the advantage of your special knowledge and skill? The committee at home will welcome your suggestions, and will give them its most careful consideration. In Canada you have experience in the use not only of the *British Pharmacopoeia* and its *Addendum*, but also of the United States *Pharmacopoeia*, and the French *Codex*. You can point out to us what discrepancies between these have proved to be of serious importance in practice, and how they may best be reconciled. You can tell us what non-official drugs are in widespread use among you, and therefore call for recognition in order that their characters and preparations may be exactly defined. You can inform us what articles in the *Pharmacopoeia* are practically obsolete in this country, in order that we may have proper data for deciding as to their omission. Forms of adulteration or contamination with which we are unfamiliar at home may be within your experience; these we should know about when we are revising our standards and tests of purity. Questions of this kind, and others which will emerge on systematic inquiry, are scarcely to be compassed by the home committee without Canadian assistance. I am sanguine that, after this straight hint, the assistance will not be withheld.

Medical Reciprocity.

Before we proceed to the business of the day, allow me a few words on a kindred subject. The co-operation between the Dominion and the United Kingdom, which I have suggested, need not be limited to the preparation of an Imperial Pharmacopoeia. Some of us would fain see it extended to the whole field of medical study and practice. You may be aware that by our Medical Act of 1886, a person who holds a recognized colonial medical diploma granted to him in a British possession, who is of good character, and who is legally entitled to practise in that British possession, is also entitled, without examination in the United Kingdom, to be registered in the *Medical Register*. But before a colonial diploma can be thus "recognized," the Privy Council must be satisfied that the British possession in question affords to home-registered practitioners such privileges of practising there as to His Majesty may seem just. And by an Act of 1905 it is further provided that for this purpose a Province or State in a larger federation shall be deemed a distinct possession, and therefore entitled to apply for recognition on its own account. Orders in Council have already been issued applying the Act to New Zealand, the States of Australia, the Provinces of India,

Ceylon and Malta, all of which grant medical diplomas of their own. And as these diplomas have been recognized by the General Medical Council, their holders are at once made capable of registration in the British *Register*, and of acquiring all the rights and privileges which registration confers. A similar enactment exists in relation to foreign countries, and already the Kingdom of Italy and the Empire of Japan have been admitted to corresponding privileges. But, with one exception, the Provinces of Canada have not yet applied for admission, and to that extent the medical federation of His Majesty's dominions is incomplete. The exception is Nova Scotia, to which the Medical Act was extended by an Order in Council on May 11th in the present year. The Medical Council learned with great satisfaction of the step thus taken by the Maritime Province, and it looks forward with interest to like applications from the other great Provinces of the Dominion. I am aware that on your Statute Book there stands a Medical Act of 1902, which, were it in operation, would go far to complete the confederation of the Provinces by providing for their common action in medical matters, and by assimilating and extending their professional privileges. And I am also to some extent aware of the internal difficulties that have hitherto prevented the Act from coming into effect. But these internal difficulties need not affect the question of Imperial recognition and reciprocity. Under our recent legislation each Province can negotiate for itself with the home authorities, as Nova Scotia has done. It need not wait for the others. His Majesty in Council is the arbiter as to the justice of its claim to be included in the medical federation of the Empire, and to be granted the wider citizenship which that implies.

As things stand, however willing the powers at home may be, a medical graduate of Ontario or Quebec cannot legally hold a medical appointment in the naval or military service of the King. He cannot be appointed surgeon to a British ship, or to any hospital or other public establishment, body or institution in the United Kingdom. He is ineligible as a medical officer of health; he cannot so much as be a candidate for one of our diplomas in hygiene or State medicine. And lastly, he may not use his degree as a qualification for private practice in the United Kingdom or in any of the British possessions—and they are not few—that are governed by our Medical Acts. These disabilities must often be irksome, and the more because, so far as Canadians are concerned, they are now self-imposed. The Imperial Parliament at least has opened the way for their removal. The next and only remaining step has to be taken by the provincial authorities.

Every year Canadian graduates come over to study and to ob-

tain diplomas at home. When I observe your splendidly-equipped medical schools and hospitals, I cannot help wishing that a strong reverse current might be set up, and that our own students and graduates might acquire the habit of crossing the Atlantic to complete or to supplement their medical education in Canada. That mutual recognition of professional qualifications would further and foster this tendency I am convinced; and I am not less sure that such educational interchanges would exert a powerful influence for good, not only upon us but upon you. Sympathy comes from mutual understanding; there is nothing so divisive as mutual ignorance.

I close, therefore, on the note with which I began. We value these occasional meetings outside our islands because they lead to our better knowledge of each other, and so strengthen the bonds of brotherhood which unite us. But the meetings are too rare to accomplish all that is desirable in this kind, and many of us are middle-aged and more before we can take advantage of them. If we could but have more intercourse, and have it younger, our mutual sympathies and affections would be warmer still. It is for this reason that I have risked your impatience by wandering a little from the proper subject-matter of our Section. Let us now return to Therapeutics.—*Brit. Med. Jour.*

Progress of Medical Science.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Post-operative Ileus.

Finney, Baltimore, in *Annals of Surgery*, June, 1906, reports 26 cases of post-operative ileus. He classifies the cases into early (before the wound has healed) and late; also into mechanical, septic (peritonitis) and adynamic (disturbances of innervation or circulation). Mechanical ileus is usually characterized by a later onset, the presence of visible peristalsis, colicky pain, asymmetrical distension, little rise in pulse and temperature. In the septic form the symptoms may be those of peritonitis; when post-operatively the ileus develops without the above symptoms it usually is adynamic. It often is impossible to make an exact diagnosis; in very early cases infection plays the predominant rôle, in later ones adhesions are more often the cause. The author hopes that the opsonic index may prove of service in the differentiation of the various forms, but, at present, the data are insufficient. The indican test is of little value. Many of the symptoms of profound depression are due to autointoxication by poisonous products especially by neurin. Severe symptoms more often occur early when the venous circulation of the intestine is obstructed. Partial obstruction is apt to become complete when some indiscretion of diet increases the production of gases. The formation of adhesions is of special interest and yet no reliable knowledge as to the cause of their appearance or disappearance has been obtained. Our ability to control their formation is consequently very limited—filling the peritoneal cavity with sterile saline solution, application of Cargile membrane, of oil, early catharsis, etc., have all been recommended, but are all of little use. In the 26 cases reported, 22 were operated upon a second time for the obstruction. Sixteen cases followed appendicitis, two were after strangulated hernia, two typhoid perforations, two cholelithiasis, one case each after pyloroplasty, tuberculous, peritonitis, volvulus and nephrotomy. The causes of obstruction were chiefly, adhesions (7), kinking (7), bands (3). In eighteen, or 78%, the cause of obstruction was due directly or indirectly to peritoneal adhesions. The seat of obstruction was in the small intestine in twenty cases, plorus or duodenum three, sigmoid two, ascending colon one. Peritonitis was present at the time of the primary

operation in fifteen, at the secondary in eight. In most of the cases the treatment consisted of freeing the adhesions or in performing an enterostomy. Ten patients died. Prompt operation should be resorted to after palliative treatment has been given a fair trial. The prognosis is unfavorably influenced by the presence of infection; in its absence it is excellent.

Mortality After Prostatectomy.

B. Tenney and H. M. Chase, Boston (*Journal A. M. A.*, May 12), have analyzed the mortality statistics of over a thousand cases of prostatectomy, with special reference to the mortality, counting as fatal cases all within six weeks of the operation and excluding such statistics as cover only a shorter period of observation, though they might give a more favorable result. The mortality by the perineal operation in their statistics is slightly less than that of the suprapubic method, and the difference is very much less in the statistics of their collection than in those collected by Proust, Watson and Escat. There is also a decidedly rising mortality from the sixth to the eighth decade, the percentages being, respectively, 5.8, 9.5 and 15, thus indicating the advantages of early operation. The statistics also show certain fatal periods; in the 73 deaths more occurred in the first forty-eight hours than in any other two days, 23 in all. In the seventh, eighth, and ninth days there were 12 deaths; on the thirteenth, fourteenth and fifteenth there were 6 deaths, and from the twentieth to the twenty-second days, inclusive, 7 deaths. Two-thirds of all the deaths occurred during these fatal periods. The duration of life following the two operations is almost indentical. The favorable statistics of certain operators are noted. Out of the 617 perineal operations, we find two men doing 211 operations and losing 2 cases within 12 days, as compared with 206 of the other operators with 22 deaths in the same period. Including the suprapubic operations, there is a total of 45 fatalities in 790 operations within the same period. The two men mentioned do not appear to have used the most rapid method or to have specially selected their cases. The presence of vesical calculus did not seem to have any favorable influence on the mortality, as claimed by Moullin, Richardson and others. The authors think that many of the fatalities must have been avoidable, and insist on the importance of due preparation of the patient, special care in the selection and use of the anesthetic, and greater attention to the after-care. A prostatectomy is not a completed piece of handiwork, like most clean laparotomies and dissecting operations, but needs constant attention for forty-eight hours especially, and later at intervals.

Treatment of Blennorrhea in Women.

One scarcely needs to remark that blennorrhea is both frequent and troublesome in woman. Dr. Houssiau observes that the folds and refolds, crypts and passages, are so numerous and so involved that an excellent opportunity is offered for the gonococcus to find lodgment, and antiseptics are of little service as a rule. It has well been said that it is a much more dangerous disease than syphilis. Not only is blennorrhea very dangerous from the standpoint of discomfort, invalidism, and even death, but it is, unfortunately, extremely common. Its symptomatology offers very little that is new. It should not be forgotten, however, that one of the most unpleasant features of this disease is its frequent lack of symptoms, for thousands of women are affected with the disease without knowing it. As to the more frank expressions, consisting of frequent and painful micturition and the formation of pus tubes, the records of gynecology are only too emphatic. The physical signs of swollen nymphæ, red, patulous meatus; roughened and red vaginal entrance, are too well known to be reiterated, and the latter manifestations, especially when the inflammation is intense, such as condylomata, ulcers of the neck of the uterus, cervical endometritis, cervicitis, swollen and patulous os, all call for minute examination and thorough and painstaking treatment. Such treatment should be local and general. Internally the old reliable aromatic oils, such as sandal, etc., retain their position, while for local treatment tamponing with ichthyol affords the best results. Such tamponing may be continued even while the woman is pregnant. The author states that great care should be taken that the true ichthyol is used, as within recent years a number of so-called synthetic "ichthyols" have been put on the market under various names or "synonyms," which are nothing more nor less than sulfonated petroleums. None of these substitutes has stood the test of time, as they have at times been found to be particularly irritating, and the author is emphatic in insisting on the use of the product that is derived from the bituminous shale from Seefeld, in the Tyrol, the true ichthyol as originally introduced by Unna, and made by the Ichthyol Co., of Hamburg. Permanganate of potassium solutions may be used previous to the application of the tampons. After such treatment, the author finds great improvement in from ten to fifteen days, not only in the urethritis, but also in the cervicitis, and the later installation of a 1- to 2-per cent. solution of silver nitrate may be of service in clearing up the miscellaneous infections in the glands and urethra.—Annales de Policlinique Centrale de Bruxelles, Feb., 1906.

Histology of Roentgenized Malignant Tissue.

William Krauss in a paper on "Histology of Roentgenized Malignant Tissue" in the *Memphis Medical Monthly*, July, 1906, after having made histological examinations of tissues that had been subjected to X Rays, says:—

"It would seem from these sections that the Roentgen ray has in this case exhibited selective action only for those tissues which it is desirable to stimulate and preserve, whereas the malignant elements are only moderately damaged; yet there was subjective improvement, which seemed to justify further exposures."

He draws the following conclusion: "Judging from the history of these cases, it would appear that the Roentgen ray has no place in the treatment of real malignancy, meaning that stage in the development of cancer when physiologic resistance is distinctly impaired, whereas surgery can frequently to some extent restore this important function. I make this statement in spite of several apparent cures in my hands. I believe the X-Ray treatment of cancer should be limited to slowly growing superficial lesions where cosmetic effect is of prime importance, but even here it should be attempted only by an expert whose judgment and experience enable him to tell when he must surrender the case to a surgeon."

Note.—We are very much impressed with the stand taken by Dr. Krauss and our experience leads us very much in the same line. The unselective action of the X-Ray is its greatest drawback. It is impossible to limit its action. The notes of one such as is given in the article above referred to is very opportune and should do a great deal of good.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN, M.B., M.D., C.M.

The Eyestrain Origin of Epilepsy.

The question of whether wearing spectacles will relieve or cure epilepsy is one that many ophthalmologists have been discussing vigorously for years. In the State of New York there is an asylum for epileptics, known as the Craig Colony, in which there are several hundred patients. The Superintendent of the colony is Dr. William Spratling, well known as the author of "Epilepsy and its Treatment," a standard work on the subject. Three years ago, Dr. Gould, of Philadelphia, an ophthalmologist of

high standing, and editor of *American Medicine*, and who was a believer in the occasional eyestrain origin of this condition, was allowed by Dr. Spratling to test the matter by fitting glasses on 68 epileptic patients.

The report of Dr. Spratling on the result states, at the end of a year, that the experiment had been fruitless—that of the 68 cases, 8 had had no attacks for several months before and after fitting of glasses, and hence do not count either way; 3 died or ceased wearing glasses; 8 had the same number of attacks before as after wearing the glasses; 19 showed a decrease in attacks; 30 showed an increase in the number of attacks. The number of attacks before fitting, of the 19 patients benefited, was 861; attacks after fitting, 479; decrease 382, or 44 per cent. The 30 who showed an increase of attacks had before the fitting 528 attacks, and afterwards 941; a gain of 413, or almost 80 per cent. The figures in the individual cases are so widely different that in Dr. Spratling's, the expert's, opinion, epilepsy is not a single prescription disease, and that the correction of the refractive abnormalities of the eyes alone is not at all likely to cure it.

In reference to this test, Dr. Gould writes (in the *Annals of Ophthalmology*):—

Three years ago, at Craig Colony, New York, I undertook a little test designed only to show that the case of the epileptic is not always hopeless, and that eyestrain might rarely account for the presence of this opprobrium of medicine. The results, as taken from the confused statistics of the official report, were as follows: The tests concerned 68 patients, all chronically diseased, many hopelessly so. Of these, according to the report, the seizures were lessened in 19 cases by 392, or 44 per cent., in three months. One patient, again according to the report, was cured, while the average of cures, during the whole period of the existence of the colony, and by all other methods of treatment combined, was one in eighty. The figures, I confess, are not worth much, but taken at their face value, one-third more cures, proportionately, by ocular treatment than by all other methods is, indeed, better than I had expected. This proportion, moreover, is doubled by a fact I have subsequently learned, the cure of a second patient who left the institution, and who had no seizures so long as he wears his glasses, so long as they are kept straight and adjusted, and so long as they are changed when advisable.

I have epitomized this story in order to emphasize several suggestions:—

1. The pleasure which the superintendent of the colony had, in his report, in pronouncing these results "disappointing," and in minimizing them, so that, since then, a hundred delighted imita-

tors and echoers should be able to teach that eyestrain had no possible causal relation to epilepsy. In truth, one of the most inexplicable of psychologic riddles is the furious glee with which some specialists rush upon the stray medical dog who suggests that a disease, at least occasionally, may be due to an unsuspected cause. Just in proportion to the mystery of the etiology, the more utterly incurable the disease, then the greater is the haste, and the enjoyment, in pouncing upon the intruding cur.

2. The same eager delight is shown by some neurologists and editors of defunct medical journals who, ever since, have been growling and snapping in their post-mortem dreams. The sweet word *disappointing* was sniffled only two weeks ago, a propos de rien, by a well-known medical journal, and several years after its obsequies.

3. My mistake, of course, consisted in not having excluded from the test the old, hopeless patients, those on the edge of the grave, and hence incapable of convulsions after death. Epilepsy, once deeply established, is doubtless incurable. All we may hope for is the best cure, i.e., prevention. All public tests should be made upon the younger and less severely afflicted patients.

4. The misfortune of the test was that there was no resident oculist or optician to see that the most requisite conditions could have been carried out in the after-history. All oculists well know, e.g., that an astigmatic lens awry, or temporarily not worn, increases the liability to attacks.

* * * * * * *

Since this article was in type Dr. Spratling has published a paper called "Epilepsy and Eyestrain," in which he says that he greatly regrets that the patient he formerly reported as cured by spectacles did not fulfil the promise of recovery. For 15 months after the glasses were ordered the patient had no attacks; but he then broke his glasses, and while not wearing any glasses he had four attacks in January. Then he again "put on glasses," and had ten attacks in two months. For nine months there were now no attacks, but several a month occurred after this. This ludicrous clinical report is followed by the following still more ludicrous statement: "The sole point to which I wish to call attention is that the glasses in this case seemed to 'repress' the epileptic attacks in a manner not unsimilar to the 'repression' that is often secured by the use of bromides, and that, like the bromides, while they may mitigate the disease, they are without power to cure." A more capital example could not be desired of the folly of committing such experiments to the care and reporting of those incapable by nature and training of realizing the simplest principles and conditions involved. Fortunately for

those who do not delight in consigning the epileptic to despair and therapeutic nihilism, the very report (as happened before) is most encouraging. Nothing could be more convincing of the power of the correction of ametropia than the facts set forth—the freedom from attacks of the patient for 15 months, their resumption with the broken and abandoned glasses, and all the rest of the history. The most important points of the entire affair are, of course, wholly omitted—what kind of glasses were ordered after two years, who ordered them, who overlooked the fitting, etc. These reports by Dr. Spratling come out every two or three years with all the clinical discrimination and clarity of a stone-crushing machine into which are cast boulders or epileptics, with the foregone conclusions of "disappointing" and "regrets." One is reminded that there is a "reformatory" in the United States where a half bushel basket of minus spherical spectacles is placed by the side of another basket of plus spherical lenses; the poor prisoners with headache or bad vision are then told to choose their own glasses from either basket and go off and wear them! And then this "repressive" effect of glasses like unto that of the bromides—what a mixture of science, sympathy and therapeutic zeal!

Thiosinamine in the Treatment of Tinnitus Aurium.

An article in the *Medical News* by McCullagh details his experience with this drug. The following are his conclusions: (1) That this drug exerts a markedly beneficial action on ear disease accompanied by the formation of new connective tissue; (2) that this beneficial action is due to an increased pliability of this tissue, allowing the usual forms of treatment to accomplish their object better; (3) that its administration should always be accompanied by mechanical measures; (4) that as good results may be obtained by administration by the mouth as hypodermically; (5) that better and more prompt results may be obtained in recent cases; (6) that it exerts a beneficial action on vertigo; (7) that care should be used in looking for contraindications; (8) that better results may be obtained with it in the relief of tinnitus than with any drug used heretofore.

The writer has purposely refrained from speaking of the result of its use on the hearing, as his original object in the use of the drug was an investigation into its effect on tinnitus, and he has not kept careful or accurate enough records of tests to make his observations along that other line of any value. He says, incidentally, that many of the patients under treatment have voluntarily mentioned or admitted upon inquiry a noticeable improvement in hearing, including those in whom the tinnitus was not

very much improved. In many cases this improvement has been decidedly marked.

Scheibe (*Münchener med. Wochenschrift*), abstracted in *Med. Rev. of Reviews*, has an analysis of the ætiology and therapeutic results obtained in a series of 527 cases of otitis media observed in private practice. The treatment employed may be summarized as follows: Acute middle ear disease without perforation is first treated either with the catheter or with the Politzer method. If the mastoid is sensitive the ice-bag is applied. In addition the abstinence from alcohol, and rest, are prescribed, and if there is an acute nasopharyngitis this is also treated. If the pain increases and there is bulging of the drum membrane, increasing tenderness over the mastoid, or fever with diminution of hearing, paracentesis is practised. If discharge is present, the meatus is daily washed, irrigated with warm 4 per cent. boric acid solution, Politzer's method is used, and the meatus is insufflated with boric acid powder and is plugged with cotton. The ordinary systemic measures are also taken, and if there is evidence of involvement of the mastoid, as is shown by swelling behind the ear or bulging of the posterior wall of the meatus, the process is opened.

Editorials.

A BRIEF HISTORY OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association was founded at Worcester on July 19th, 1832, being originally designated the "Provincial Medical and Surgical Association."

On that day, fifty medical men attended a meeting at the Worcester Infirmary, convened by Dr. (afterwards Sir) Charles Hastings, to consider the formation of the proposed Association. Dr. Edward Johnstone, of Birmingham, presided, and after an address by Dr. Hastings on the objects contemplated, it was unanimously resolved that an Association should be formed; a code of laws was adopted, and officers elected. The Association began with a membership of 140.

At the first annual meeting, held at Bristol, on July 19th, 1833, it was announced that the number of members had increased to 316. Nearly 200 attended the meeting.

At the second annual meeting, held at Birmingham, on July 18th, 1834, 250 members were present, out of a total membership of 450.

The third annual meeting, held at Oxford, on July 23rd, 1835, was attended by more than 300 persons, the membership of the Association being then 500.

The fourth annual meeting was held at Manchester, on July 21st, 1836. The number of members of the Association was reported to be 600.

Formation of the first Branch.—The Eastern Provincial Medical and Surgical Association, which had been founded at a meeting held at Bury St. Edmunds, in the previous September, sent a deputation to the meeting, and a joint committee of the two Associations was appointed to consider the possibility of fusion. Subsequently it was arranged that the Eastern Association should dissolve as a separate body, and that its members should become members of the Provincial Medical and Surgical Association, and be constituted a Branch thereof.

At the fifth annual meeting, held at Cheltenham, on July 19th and 20th, 1837, the number of members was reported to be 940.

The rules relating to Branches were, as already stated, adopted, and it was reported that Branches had been formed at Bath, Wells and Southampton. An address of homage to Queen Victoria, who had just ascended the throne, was unanimously adopted and ordered to be presented.

In 1843 the membership was 1,628.

In 1847-48 laws were considered and adopted providing (*a*) for the expulsion of members guilty of unprofessional conduct; (*b*) for payment of the subscription in advance, and to deprive those in arrear of privileges of membership.

In 1853 the membership was 1,853.

In the years 1854 to 1856 reform of the constitution was undertaken, and in the result:—

(*a*) The title was altered to British Medical Association.

(*b*) The Council was made strictly representative, being elected by the Branches in the proportion of one member of Council for every twenty members together with the Honorary Secretary of every Branch ex officio.

The "General Council" so constituted appointed the "Executive Council," or, as it was henceforward called, the "Committee of Council."

In 1862 the annual meeting of the Association was first held in London. The membership of the Association was then 2,120.

In 1867 the Association first met in Ireland, namely, at Dublin. The scientific business of the annual meeting was for the first time arranged in sections, of which there were four, namely:—Medicine, Physiology, Surgery and Midwifery.

In 1873	the	membership	of	the	Association was 5,400.
" 1883	"	"	"	"	10,050.
" 1893	"	"	"	"	14,703.
" 1903	"	"	"	"	18,189.

The British Medical Association, under its present constitution, is a federation of local medical societies, called Divisions. The Divisions are grouped for certain purposes in local bodies, called Branches. The aggregate of Branches composes the Association.

Each Division and Branch has its own local administration and

rules, subject only to such restrictions upon each as are deemed needful for the harmonious co-operation of all.

As part of the annual general meeting sectional general meetings are held for the consideration of matters pertaining to the medical and allied sciences. The officers of sections are appointed by the Council, which also has the duty of framing the regulations by which the proceedings are governed.

It is the practice of the Association that the President should inaugurate his year of office by an address to the annual general meeting of the Association, and addresses in Medicine, Surgery, Obstetrics, or kindred subjects, are also given on this occasion by distinguished members of the profession who are appointed for the purpose by the Council.

The Council.

The Council is composed of certain officers of the Association, of members elected by the Branches, of members appointed to represent the Navy, Army, and Indian Medical Services, and of members, to the number of not more than one-tenth the elected members, co-opted by the Council; altogether about seventy members.

The Council elects its own Chairman, holding office for such period as the Council may assign (usually three years), and fixes the time and place of its own meetings, which in practice are held quarterly (and at other times when required) in London, and daily during the annual meeting in the place where that is held.

The Council, subject to the regulations of the Association, and the decisions of general and representative meetings, has the general management of the affairs of the Association, including the *Journal,* and appoints the paid officers. It determines the boundaries of Divisions and Branches, and under certain conditions the grouping for electoral purposes. It elects new members, if not residing within the area of any Branch, nominates honorary members for election by the general meeting, and has the power of expulsion on the recommendation of a Branch. Rules of Divisions and Branches are not valid until sanctioned by the Council.

The Council fixes the time of the annual meeting, controls the

general arrangements for general and representative meetings, and has entire control of the scientific work of the meeting, including the appointment of readers of addresses and officers of sections, and the determination of the programme of the sections.

The first-class travelling expenses of members of Council attending a meeting thereof are defrayed by the Association.

The Montreal Meeting.

At a meeting of the British Medical Association held in Nottingham in 1892, Sir William Hingston said he trusted that at no very distant date the British Medical Association would see their way to paying Canada a visit. They would there find a heterogeneous population—French, English, Scotch, and Irish—but amongst them all an intense love of British institutions, and a very deep attachment to Her Most Gracious Majesty Queen Victoria. Again, in 1896, a number of physicians from Montreal and Toronto, speaking on behalf of Canada, invited the Society to hold the 1897 meeting in Montreal. The Council accepted the invitation without a dissenting voice, and nominated Dr. Roddick as President. Regarding the meeting in Montreal, we spoke as follows in the Canadian Practitioner of September, 1897:—

"To say that the Montreal meeting was a grand success is simply giving expression to a well-known fact in very plain and simple words. One feels, however, that numerous accentuated superlatives are absolutely necessary, in giving anything like a correct description of this great gathering. We shall not attempt to use such, but shall simply say that the success of the meeting has in all respects exceeded the most sanguine expectations of all the physicians interested, both in Great Britain and Canada. Montreal is noted for her generous hospitality which has so frequently been shown in the past, but this time she far exceeded any and all of her former efforts. Her physicians united in a continuous and untiring effort to keep the machinery of the meeting in good running order, and to royally entertain their guests, both British and Canadian. Their work in the former direction

was perfect and complete, their hospitality was more than ordinary mortals could accept in its entirety."

Dr. Arthur Giles spoke as follows in the London *Lancet*:—"It seems to us that, with this meeting at Montreal, memorable as it will be in many ways, the British Medical Association enters upon a new career. Those of its members who are attending it from London will realize that in Greater Britain the medical profession is animated by the same spirit as at home. That with the common participation of membership of the same body there must be equally a common desire towards the same ends, the furtherance of the art and science of medicine for the sake of humanity, the promotion of fellowship between those who pursue the same calling. More than this, it may be hoped that as the Association expands, its sphere of work will widen too, and that some of these objects rehearsed by Dr. Roddick as originally propounded by its founders will be extended to all the Empire. The Association has long since ceased to be 'provincial,' it is now more than insular, and with its world-wide expansion must come the growth of new ideas, the emancipation from the fetters of narrow policies, and the working together of the medical profession of the British Empire to attain all that is most worthy in the promotion of professional aims, and to maintain a high standard of professional honor."

The Toronto Meeting.

The profession of Canada were greatly pleased last year to learn that the next meeting of the British Medical Association would be held in this country. The Council of the Association, in response to an invitation from Canadian delegates, decided that Toronto would be the place of meeting in 1906. We in Toronto considered that out city was highly honored by the decision of the Council; but we accepted all the responsibilities thereof with a certain amount of diffidence, to some extent accentuated by the success of the Montreal meeting. We are glad to be able to state, however, that the profession of Toronto were thoroughly united in their endeavors to make the recent meeting a success, and in so doing received the unanimous support of all Canada.

The Montreal *Medical Journal* spoke as follows:—"The British Medical Association will meet in Toronto in 1906. There are in Montreal many persons yet living who acquired some experience during the meeting which was held in 1897, and the Committee on Arrangements might learn of us."

We had commenced to consult with our friends in Montreal even before these words were printed, and we are glad to be able to say that we received invaluable assistance from them in more ways than we shall undertake to mention.

The work of preparation was placed in the hands of certain committees, of which the most important was the Arrangement Committee, who met regularly and frequently, and supervised in a general way the work of the other committees. The other committees completed the work assigned to them in a most satisfactory way.

The Exhibits Committee placed their museum in the main building of the University of Toronto. They also issued a museum catalogue which contained a plan of the exhibit halls, a description of the exhibits, and an index of the exhibitors and the advertisers. We understand that the exhibitors, as well as the members present, were thoroughly satisfied with the admirable work that was done by this committee.

The principal work of the Printing and Publishing Committee was the publication of a booklet called "Hand Book and Souvenir of Canada, British Medical Association, Toronto Meeting, 1906." No complaint has been made so far as we know as to the work of this committee.

The Entertainments Committee did much very valuable work, both in the interests of the visiting members and also their families. Among the entertainments provided were:—

1. The garden party given by the Lieutenant-Governor in the Government House Grounds.

2. Reception by the President and Mrs. Reeve in the University Quadrangle.

3. A garden party by Mr. and Mrs. H. C. Cox.

4. A garden party by the trustees at the Toronto General Hospital.

5. A reception by His Worship the Mayor and City Council at City Hall.

6. A band concert in the Dean's garden, University College.

7. A garden party by Mr. and Mrs. E. B. Osler.

8. A reception by the Commodore and members of the Royal Canadian Yacht Club, at the Island.

Among the entertainments provided for ladies only were:—

1. A coaching tour of the city.

2. A luncheon at the Lambton Golf Club.

3. A garden party by the University Women's Club.

4. A luncheon at the Hunt Club.

5. An excursion to Niagara Falls.

In addition to these official entertainments, we are glad to say that the efforts of the physicians of Toronto to entertain our visitors in a private way were better than the city has ever known before.

The profession of Toronto feel exceedingly grateful to the general public for the extraordinary interest they manifested in the meeting, and the valuable assistance they rendered in innumerable ways.

The Transportation Committee made excellent arrangements for transportation, especially for those who came across the ocean, and in addition mapped out many trips through various parts of Canada and the United States. Among the excursions arranged by the Excursion Committee were one to Niagara Falls, one to Muskoka Lakes, and one to Guelph, all of which were entirely satisfactory.

The Hotels and Lodging Committee did most admirable work; as a consequence all the visitors of both sexes were comfortably housed.

We cannot speak too highly as to the work of the Dinner Committee. It is no easy matter to conduct successfully a large banquet in a *big barn*. At the dinner given on the evening of the 23rd in the Victoria Rink, the service was good, the hot food was brought in *hot*, and the cold food was brought in *cold*. The wines were pronounced excellent by those who tasted them. The speeches were as a rule short, snappy and sparkling. The building was beautifully decorated. There were about 450 present.

The other committees that did good work were the Membership Committee, the Reception Committee, the Finance Committee, and the Pathological Museum Committee.

We purposely avoid mentioning names, because all the members of committees worked faithfully and well.

One of our friends from the United States has written a very kind letter, from which we extract the following, especially because of the criticism, which contains certain opinions with regard to the publication of the discussions on papers read in Sections which we cordially endorse:—

"The meeting as a whole was one of the best conducted that I have ever attended. The University buildings were an ideal place for the Sections, the rooms being in such proximity that one could wander from Section to Section without wasting time. As I have already expressed to you, the annual dinner was one of the best arranged that it has been my good fortune to attend. The various courses were excellent and served promptly, the hall itself was pleasingly decorated, and the only drawback was the size of the place, which precluded those seated at a little distance from hearing the excellent speeches. This, however, where so many were gathered, could not be obviated, and I do not see how the affair could have been better arranged.

"My only criticism of the whole meeting would be a mild protest against the continuance of the obsolete practice of requiring those who took part in the discussions following the papers read in Sections to personally write down their remarks. This was very annoying, for often while one was writing, the discussion of others was wholly lost to him. It is also impossible for one to put down on paper, after having participated in a discussion, just what he may have said, so that many of the excellent points made are irretrieveably lost. If a stenographer takes down a discussion, and later submits his remarks to each participant, the result is much better, and the discussion becomes often of greater value than the paper presented. As editor of a medical journal, you are in a position to urge a change in this regard, and I sincerely hope that you will do so, since this matter is the, or about the, only defect in the management of the Association's meeting."

The meetings were held in the various buildings of the University of Toronto. The general meetings were held, and the general addresses delivered, in the new Convocation Hall. The

Sections were held as follows:—Surgery, Chemistry Building; Medicine, Physiology and Therapeutics, Medical Building; State Medicine, New Science Building; Anatomy and Pathology, Biological Building; Laryngology and Otology, Ophthalmology, Physiology, Obstetrics and Gynæcology, Dermatology, and Pedriatics, Main Building.

Each Section had in addition a committee room adjoining for its officers. Many other rooms were provided, such as Reading and Writing Rooms, Post Office, Gents' Tea-room, Smoking Room, Ladies' Tea-room, Stenographers' Room, and Registration Room.

There was a general consensus of opinion that the addresses delivered in the Convocation Hall were of a very high order. These have already been published in the *British Medical Journal*, and from them we publish abstracts in this issue. When addresses are so uniformly good as these it seems a pity to spoil them by making abstracts; but limited space precludes the possibility of publishing them in full.

It seems to be one of the unwritten rules of the Association that no President of a Section shall deliver a formal address, but each is allowed to make "a few remarks." Some of these "few remarks" were vastly important, were highly appreciated by those who heard them, and will be found exceedingly interesting reading by those who had not the good fortune to be present.

It is difficult for any one not present to have anything like an adequate conception of the high character of the men from the British Isles and the United States, and the magnificent work that was done by them in the different Sections. Most of our Canadian members in attendance have a fair idea of the excellence of the work done in the three Sections of Medicine, Surgery, and Obstetrics and Gynæcology, which were the most largely attended. but many do not realize that equally good (perhaps better from a scientific standpoint) work was done in the sections of Pathology, Physiology, Anatomy, and many others. So far as we can learn there never was such a uniformly high standard, as to papers and discussions, reached at any previous meeting. It was a revelation to many of us to discover such a large proportion of *great* men among our kinsmen from across the water. Their greatness was appreciated more highly

on account of the charming modesty which almost invariably accompanied it. The educated, cultured gentleman from our dear Mother Land is one of the finest specimens of humanity that can be found in the world.

It is also somewhat difficult to fully realize the inestimable value of the good work done by our dear, kind friends of the United States. Their great ability, combined with their keenness and alertness in discussion, assisted materially in making things "go with a hum." They are making such wonderful strides in the United States as to things medical that it is very hard to realize how rapidly they are forging to the front. Our most hearty thanks are due to the physicians, surgeons, and pure scientists of that country for their valuable assistance at the Toronto meeting.

We were so much surprised at the size of the meeting that we do not yet appreciate fully what such a large attendance means. Our estimate was 800 to 1,000, some estimated so high as 1,000 to 1,200. There were 1,984 members registered. Of these, 1,103 were Canadians. If we include the visitors from the United States, other invited guests, medical students, and ladies, we find that the total number in attendance was nearly 3,000. This is the largest meeting of the British Medical Association excepting one held in London, where about 2,200 members were registered.

In all cases the numbers greatly exceeded our expectations, but our greatest surprise was due to the large number of Canadians who put in an appearance. We have no doubt that the wonderful success of the Montreal meeting, to which we have so often referred, had much to do with the large attendance on this occasion.

NOTES.

Ontario Medical Association.

The annual meeting of the Ontario Medical Association was held on the evening of August 30th, at Toronto, the President, Dr. Geo. A. Bingham, in the chair. The meeting, which was a purely formal one, was very short, and the officers of last year were re-elected.

Canadian Medical Association.

The fifty-ninth annual meeting of the Canadian Medical Association was held in the new Science Building, College Street, Toronto, on the afternoon of Monday, July 20th, at 2 p.m. The meeting was comparatively brief, and entirely confined to business. The Committee on Reorganization submitted a report in which were outlined a practically new constitution and by-laws for the Association. On account of the importance of the report, and the small attendance of the meeting, it was decided to postpone the consideration of this report until the next annual meeting, which will be held in Montreal. The following officers were re-elected: Dr. A. McPhedran, of Toronto, President; Dr. Small, of Ottawa, Treasurer; and Dr. Geo. E. Elliott, of Toronto, General Secretary.

Immediately after the meeting there was a session of the Canadian Medical Protective Association. The annual report, showing that there was considerable increase in the membership and the financial strength of the Association, was presented. Dr. Powell, of Ottawa, was re-elected President, and Dr. Argue, of Ottawa, was elected Secretary-Treasurer in the place of Dr. J. A. Grant, Jr., of Ottawa, resigned.

The next meeting of the Mississippi Valley Medical Association will be held at Hot Springs, Arkansas, November 6, 7 and 8, under the presidency of Dr. J. H. Carstens, of Detroit, Mich. The annual addresses will be delivered by Dr. Frank Parsons Norbury, Jacksonville, Ill., in Medicine, and by Dr. Florus F. Lawrence, of Columbus, Ohio, in Surgery.

Dr. Norbury has chosen for the subject of his address, "Clinical Psychology," and Dr. Lawrence will discuss in his address, "Surgical Principles and Theories." In addition to these addresses there will be the annual address of the President, Dr. Carstens.

Communications regarding papers should be addressed to the Secretary, Dr. Henry E. Tuley, 111 W. Kentucky Street, Louisville, Ky.

Elaborate arrangements have been made by the local profession of Hot Springs to entertain the visiting doctors and their wives, the meeting being held at one of the largest hotels, which will be specially opened in advance of the season to accommodate the Association. A cordial invitation is extended to every physician in the Valley to attend this meeting, for which a large number of interesting and valuable papers have been promised.

The British Association for the Advancement of Science decided at the meeting held in York, England, early in August, to hold the next meeting in Winnipeg, in 1909.

The American Orthopedic Association.

The annual meeting of this association was held in Toronto, August 20th to 23rd, under the presidency of Dr. B. E. McKenzie, of this city. There were present 40 members, all of whom attended the sessions of the British Medical Association after adjournment.

Will Rebuild.

The trustees of the College of Physicians and Surgeons of San Francisco are completing plans to rebuild a greater medical college than the one that was destroyed by the recent fire. Temporary quarters have been secured for lecturing purposes. Clinics will be established and the City and County Clinics and other hospital clinics will continue as before. The college will open on the usual date, September 17th, 1906.—*Pacific Med. Jour.*

Medical Colleges Move.

The Medical Department of the University of California has moved to Berkeley for the first and second years students. The third and fourth years' work will be done in San Francisco as heretofore.—*Pacific Med. Jour.*

A Toronto Souvenir Publication.

Apropos of the recent Toronto meeting of the British Medical Association there has been issued a sumptuous publication entitled "Handbook and Souvenir of Canada." It is a magnificent specimen of the printer's art, and it is an exceedingly valuable repository of varied information concerning the great country that adjoins ours on the north. The text has been prepared in a delightful spirit, and it is a pleasure to read it.—*N. Y. Med. Jl.*

Personals.

Dr. F. G. Finley, of Montreal, was seriously injured July 23rd, as a result of an accident in which his carriage was overturned by a trolley car.

Dr. G. Reid Simpson has commenced practice at 82 College Street, Toronto, and will devote himself to diseases of the eye, ear, nose and throat.

Dr. Percy Goldsmith has removed from Belleville to 84 Carlton Street, Toronto, where he is continuing his practice in connection with diseases of the nose, throat and ear.

Dr. W. H. Harvey, a graduate of the University of Toronto, has been successful in securing the British Medical Association scholarship in research. He is at present taking a special course at Cambridge University, Eng.

Dr. Geo. A. Peters returned to Toronto after a three months' vacation spent in England, Aug. 29th, and resumed his regular consultation and operative work, Sept. 1st. He is in excellent health and spirits and looks quite "fit" in all respects.

Mr. C. D. Hamilton, a student in medicine at the University of Toronto, son of Dr. C. J. Hamilton, of Cornwall, met with a painful accident on August 2nd. While boating on Smooth Water Lake, he raised his revolver to shoot at a loon, but the weapon being discharged prematurely, the bullet passed through his thigh. He was conveyed to North Bay, and is now reported to be recovering.

Obituary.

DR. J. J. ELLIOTT, M.D.

Dr. J. J. Elliott, 263 Victoria Street, Toronto, died in the Toronto General Hospital, July 27th, aged 31. He received his medical education in Trinity Medical College, and received the degree of M.D. from Trinity University in 1896. After spending one year on the Intern Staff of the T. G. H. he commenced practice in this city. After a struggle of a few years he built up a good practice, and was much beloved by his patients and intimate friends. His illness lasted about six months, the cause of death being cancer of the stomach.

GEO. J. CAMPBELL., M.D.

Dr. Campbell, of Halifax, only son of Dr. D. A. Campbell, and nephew of Dr. Geo. M. Campbell, both also of Halifax, N.S., died July 19th after a short illness from pneumonia. One of the sad features connected with his untimely death is the fact that he was on his wedding trip when he contracted the disease.

A. K. McLEAN, M.D.

Dr. McLean, of Chicago, died at Battleford, Sask., July 29th, of dysentery. He was a native of Ontario and graduated from the University of Toronto in 1897. After graduating he went immediately to Chicago, where he was successful in building up a good practice in diseases of the eye, ear, nose and throat.

The only son of Dr. McNaughton, of the staff of the London Asylum for Insane, died July 24th, of tetanus.

Dr. J. W. Chisholm, of Halifax, N.S., was drowned in Big Glace Bay, July 23rd. He was swimming out with the tide, and in trying to return became exhausted and sank.

Book Reviews.

Progressive Medicine, Vol. VIII., No. 2. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by H. A. HALL and H. R. M. LANDIS, June 1st, 1906. Lea Bros. & Co., Philadelphia and New York.

The contents of this volume are: Hernia, by Wm. R. Coley; Surgery of Abdomen, by Edw. M. Foote; Gynæcology, by J. G. Clark; Diseases of Blood, Spleen, etc., by A. Stengel; Ophthalmology, by Edw. Jackson.

Progressive Medicine is one of the best resumés published, and a useful reference work, even when many years old. This volume keeps up its past record of efficiency.

The Prophylaxis and Treatment of Internal Diseases; designed for the use of practitioners and of advanced students of medicine. By F. FORCHHEIMER, M.D., Professor of Theory and Practice of Medicine and Clinical Medicine, Medical College of Ohio, Dept. of Medicine of University of Cincinnati; Physician to the Good Samaritan; Member of the Association of American Physicians, the American Pediatric Society, etc. New York and London: D. Appleton & Co.

This eminently practical and scientific work is the only book of its kind in America. Dr. Forchheimer tries to embody in it the patient observations of a lifetime, and arrange them in such a way as to be readily useful to a busy practitioner. This volume has, we feel sure, a prosperous future, for it is a companion to the works on the practice of medicine, where treatment usually receives but scant courtesy.

Elementary Manual of Regional Topographical Dermatology. By R. SABOURAUD, Director of the City of Paris Dermatological Laboratory St. Louis Hospital. English translation by C. F. MARSHALL, late Assistant Surgeon to the Hospital for Diseaes of the Skin, Blackfriars, London, with 231 illustrations in the text. New York: Rebman Company, 1123 Broadway. London: Rebman Limited, 123 Shaftesbury Ave. Toronto: C. E. Wingate, 2 Richmond St. East.

Atlas of Typical Operations in Surgery. By DR. PH. BOCKENHEIMER and DR. FRITZ FROHSE. Sixty illustrations from water colors by FRANZ FROHSE, Berlin. Adapted English Version by J. HOWELL EVANS, M.A., M.B. M.Ch., Oxon., F.R.C.S., England. Demonstrator of Operative Surgery at St. George's Hospital. Late Senior Demonstrator of Human Anatomy at St. George's Hospital, London. Assistant Surgeon to the Cancer Hospital, London. Surgical Registrar Chelsea Hospital for Women, London. New York: Rebman Company, 1123 Broadway. London: Rebman Limited, 129 Shaftesbury Ave. Toronto: C. E. Wingate, 2 Richmond St. East.

The Atlas is an English translation from the original German, with most elaborate and accurate illustrations. Twenty-nine typical operations are tersely and minutely described. The technique is thoroughly gone into and an operator should be able to follow in complete detail any of the operations described. The instruments that are required are named and illustrated, which is a great help, and prevents one when operating in private, from forgetting some essential instrument. The anatomical relations are exactly and carefully depicted in colors, and those very true to nature. The descriptions, for instance, of

hernitomy with the accompanying illustrations, is like a demonstration on the cadaver; there are fine plates to illustrate the different steps of the operation. Each of the other operations is as accurately described. The letter press is clear, bold type on excellent paper, makes it pleasing to the eye. The publishers have spared no expense in reproducing the work with the accuracy of the original. We feel confident that the volume will fill a want that is often experienced by operators.

Saunder's New Books

Messrs. W. B. Saunders Company announce for publication in the early fall the following excellent and practical works:—

Keen's Surgery: Its Principles and Practice (Volume I.).
Sobotta and McMurrich's Human Anatomy (Volume III.).
Webster's Text-book of Gynæcology.
Hill's Histology and Organography.
McConnell's Pathology.
Morrow's Immediate Care of the Injured.
Stevenson's Photoscopy (Retinoscopy and Skiascopy).
Preiswerk and Warren's Atlas of Dentistry.
Goepp's State Board Questions and Answers.
Lusk's Elements of Nutrition.

The most notable announcement is the new work on Surgery, edited by Dr. W. W. Keen, complete in five octavo volumes, and containing over 1,500 original illustrations. The entire work is written by the leaders of modern surgery—men whose names are inseparably associated with the subjects upon which they have written. Without question, Keen's Surgery will represent the best surgical practice of to-day.

Handbook of Electricity in Medicine. By Dr. W. H. Guillminot (Paris), translated by W. Deane Butcher, M.R.C.S., Surgeon to the London Skin Hospital; with eight plates in colors and seventy-nine illustrations. New York: Rebman Company, 1123 Broadway. London: Rebman Limited, 129 Shaftesbury Avenue. Toronto: C. E. Wingate, 2 Richmond St. East. 1906.

A new book on the subject of electricity in medicine is made necessary every year or so by reason of the rapid advances made in the science, both as regards the discovery of new fields as well as in the exact interpretation of well-known phenomena.

The first half of this very acceptable book is given up to the theory of electricity, and is fairly tedious, but one is well repaid for the time spent by a more thorough understanding of the practical application of electricity in medicine and surgery found in the second half. The Röntgen, Finsen light, continuous current, etc., are discussed in an exact way that leaves nothing to be desired; the section on skin diseases, including radiotherapy in skin diseases, is of especial interest.

It is a volume of 560 pages in good type and with excellent plates.

Selections.

Treatment of Tuberculosis with Tubercul.

In the treatment of tuberculosis, Hermann Frey states that he has had very good results with "tuberculol," a preparation made directly from tubercle bacilli. The tuberculol is preserved with phenol, and forms a clear, aqueous liquid of such strength that 1 Cc. will kill a healthy guinea-pig weighing 250 Gm. The necessary amount to kill a guinea-pig of 250 Gm. is termed 1 d. l. (dosis letalis), and this amount, together with other dilutions in the decimal system (0.1 d. l.; 0.01 d. l., etc.) are put up in sealed vials. The initial dose must be very small (1-10,000 to 5-10,000 d. l.). The injections are continued every day until a slight reaction follows. After eight to ten injections, the strength of the solution has generally been increased ten times. The susceptibility varies considerably, and is by no means absolutely proportional to the severity of the process in the lungs. A local reaction without general symptoms, such as fever, is a very favorable sign, as such cases are frequently cured. As soon as a reaction is seen, the last dose is repeated, and if no tolerance is established after a second repetition, a solution ten times weaker is employed. With the appearance of a reaction, the injections are no longer given every day, but after intermissions varying from one to two to eight days.

Tuberculol is not only much stronger than most tuberculin preparations, but, if given carefully, will rarely disappoint. It possesses the advantage of being uniform in strength and very concentrated, so that only small amounts of fluid need be injected. The treatment results in the formation of an area of hyperemia and the serous transudation about the foci, and in the production of anti-bodies in the system. Great care should be exercised in injecting cases already far advanced in the disease. Intercurrent, febrile conditions must be regarded as a contraindication. Occasionally the sputum becomes slightly bloody during the treatment, but this need not alarm. The dose should here be increased more carefully. Even in mixed infections with streptococci, good results were frequently observed.—*Wien klin. Rundschau.*

Therapeutic Action of the Iodides.

James Burnet read a paper on the therapeutic action of the iodides, showing that they were alteratives which influenced metabolism and secretion, at a recent meeting of the Therapeutic Society, London. He said they had long been used against syphilis and scrofula, and more recently for gout, rheumatism, aneu-

rysm, and arterioclerosis. They were formerly supposed to act by dilating arterioles and diminishing the blood pressure, but they had no effect on the blood pressure or pulse, though they promoted the coagulation of the blood.

He found iodipin, or iodized sesame oil, most effectual injected under the skin, as this did not cause any gastric disturbance, and the iodine was slowly set free by oxidation. It relieved arterioclerosis by diminishing the uric acid dissolved in the blood and thus relaxed arterioles and relieved aneurysm, if syphilitic, by removing pathological effusion and counteracting the poison. In angina pectoris it must be given in large doses, 60 grn. daily for months. It was most useful in chronic pulmonary diseases, especially fibrous and emphysema, relieving dyspnea and liquefying the bronchial secretion, and it was best given in doses of 15 grn. at bedtime. In bronchial asthma doses of 10 grn. every two hours were very useful either by relieving spasms or freeing the blood from uric acid. In syphilis it was most useful from its anti-toxic powers and its eliminative action, particularly in affections of the nervous system and headache. In locomotor ataxia 120 grn. had been given daily with the best results. It had also been used with success in cases of intermittent fever, puerperal fever and erysipelas.

In chronic rheumatism, neuralgia, lumbago and sciatica, potassium iodide was often useful, probably by diminishing the uric acid dissolved in the blood; it was best combined with salicylic acid, which eliminated this acid. In cases of effusion, especially from interstitial nephrtis or cirrhosis, iodides often were of service. In lead or mercurial poisoning they removed the metal from the tissues and caused its excretion. In simple goitre they were of great service if used early, but not in exophthalmic goitre. The iodide of sodium was less depressing than that of potassium.—*The Lancet.*

Pancreatitis and Biliary Lithiasis.

Quénu and Duval have operated on four patients with pancreatitis occurring in the course of a gallstone affection. They have been able to find reports of other cases, bringing the total to 118. All varieties of pancreatitis have been encountered, and Kehr remarked recently that the oftener he operated the more frequently he found lesions in the pancreas. The pancreatitis was chronic in about half the cases on record, and almost always localized in the head of the gland. When the gallstone affection is accompanied by pancreatitis the biliary attack is not typical; there are always certain abnormal details. The location and the nature of the pain are a little different. It may be referred to

the stomach or to the region between the sternum and the umbilicus, and the greatest tenderness may be in the centre of the epigastrium. The pain may radiate into the back, between the shoulders or toward the left shoulder. Vomiting is more frequent than in simple lithiasis. In one personal case the vomiting was almost uncontrollable. The syndrome is that of pancreatic colic superposed on the gallstone colic. In only ten cases was a tumor to be palpated, and in some it was supposed to be an invagination. In two cases the tumor was palpated under the false ribs on the left. Functional tests of the pancreas are more instructive than the other findings. The urine or the feces, or both, can be examined. In 21 of the cases of acute pancreatitis an operation was undertaken, with 13 deaths. None of the five patients with hemorrhagic pancreatitis operated on survived. The cases with suppuration or necrosis terminated fatally in 45 per cent. All but eight recovered in the 62 patients with chronic pancreatitis treated by operation and ample drainage. The particulars of the total material are summarized and the four personal cases are described in detail.—*J.A.M.A.*

Treatment of Abortion.

H. J. Boldt, of New York, considers the induction of an abortion justifiable in pernicious hyperemesis, in some cases of chorea, in certain forms of convulsive seizures, nephritis preceding or manifesting itself early in pregnancy, and in certain cases of contracted pelvis. If the well-known bougie method does not bring about the desired result in from twenty-four to forty-eight hours, it may be supplanted with a tampon of gauze carried into the uterine interior.

The treatment of abortion he considers under four heads: (1) Imminent abortion may be prevented by absolute rest in bed and the use of drugs like codeine and viburnum prunifolium; (2) progressing abortion, and (3) incomplete abortion may be assisted to a spontaneous termination by a hot vaginal antiseptic douche and vaginal gauze packing. An oxytocic should be administered internally. If the result is not satisfactory, after twenty-four hours the partially dilated cervical canal should be packed with gauze, and the vagina below tightly filled with the same material. Uterine contraction will thus be usually incited and everything expelled. If too much bleeding is going on, the uterus may be emptied with the finger or placenta forceps, and ergot administered, two or three doses usually sufficing. The author prefers to give the expectant plan of treatment the widest possible range. In cases of post-abortive persistent bleeding, digital exploration of the uterine cavity (if necessary with the

aid of a post-cervical incision) should be made. In cases presenting evidence of infection the uterus should be emptied as soon as possible whether the cervix is dilated or contracted. A branched steel dilator may be used for dilating the cervix and then a broad dull curette. The author is opposed to intra-uterine tamponade. Bad cases of sepsis may justify panhysterectomy. (4) Complete abortion requires only rest in bed.

In patients in whom the uterus was not markedly enlarged and the cervix firmly contracted, the author saw the most marked benefit from the administration of stypticin in 3 grn. doses, given in capsules at intervals of three hours. The powder should be ordered to be put in a dry form into the capsules. Should the bleeding not cease from the administration of one of the remedies mentioned, curetting is indicated, with subsequent irrigation with a 1 per cent. carbolic acid solution.—*Jour. A. M. A.*

Treatment of Erysipelas.

There being two forms of erysipelas, states I. H. Hunter, of Sopchoppy, Fla., the treatment must be varied to suit the case. This disease, when neglected, and when affecting surfaces over important organs, is a very serious matter. In the cutaneous form, the author bathes the parts in a hot bichloride solution, and then applies the following:—

Ichthyol	ʒ ij
Petrolati	ʒ i

Apply locally.

If the patient is weak and old, he gives strychnine, 1-60 grn. doses, three or four times daily, keeping the bowels open thoroughly. In the phlegmonous form he uses the following:—

Ichthyol	ʒ ii
Salol	ʒ i
Camphoræ	ʒ i
Menthol	gr. xx
Petrolati, qs. ad	ʒ ij

Apply on surface hot as can be borne.

Internally the author uses the syrup of iodide of iron in big doses, with plenty of stimulants, such as good rye whisky, and sees to it that the bowels and kidneys are acting freely.—*Med. Mirror.*

Suppression of urine in infants is extremely rare, and in any case in which the child is unable to pass its urine it is far more likely that there is some congenital source of obstruction. The existence of this should be determined by the prompt introduction of a soft rubber catheter.—*International Journal of Surgery.*

The Canadian Practitioner and Review.

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Original Communications

DIRECTIONS FOR NURSE AND HOUSE PHYSICIAN, BURNSIDE LYING-IN HOSPITAL, TORONTO.

DIRECTIONS FOR NURSE.

PATIENT ON ADMISSION.

Have the patient undressed at once, and her cast-off clothing placed in a receptacle, from which it is to be taken for fumigation.

Let her then take a warm tub-bath, after which she is to be dressed in hospital clothing.

Then make a record of her pulse, temperature, and respiration.

Take pulse and temperature morning and evening while "waiting," and record everything abnormal.

PREPARATION AFTER ONSET OF LABOR.

Give soapsuds enema.

Give warm bath.

Let patient then put on a nightgown and remain in bed until examined.

Prepare delivery room and table.

Have at hand sterile towels, gauze sponges, absorbent cotton balls, thread for cord, three basins for solutions of sterile water, mercury bichloride, and lysol or cresoline, scissors, and two clamps.

Place small portable table near bed and operator.

FURTHER PREPARATION OF EXTERNAL GENITALIA.

After patient is placed on operating table:

Put Kelly's pad under buttocks.

Cut short all hair at sides of vulva, and all hairs above long enough to reach the vulva.

Give a vaginal douche of green soapsuds at about 110 degs. F.

Scrub the lower abdomen, pubes, vulva, perineum, buttocks and thighs, using green soap; then wash with warm sterile water, then with bichloride solution.

During the scrubbing process, wash from before backwards, *i.e.*, towards the anus.

Then place a bichloride guard over the vulva.

If labor is advancing too rapidly to allow all these procedures, omit the douche, but, if possible, cut short the hairs at side of vulva, and wash vulva and adjacent parts.

Then remove the Kelly pad, and place under back, buttocks, and thighs a fresh sterilized draw-sheet, and an absorbent gauze pad under the buttocks.

In prolonged labor give a second rectal enema in twelve hours after the first.

If there is any operative interference, wash the external genitalia again, and put on the Snively stocking-drawers.

The patient's legs are then to be held or fastened with leg-straps, as directed by the operator.

Catheterize only when directed by the obstetrician, the house physician, or head nurse.

MANAGEMENT OF PATIENT AFTER LABOR.

Wash the external parts first with warm sterile water, then with bichloride solution, then cover with bichloride pad retained in place by T-bandage, or fastened to binder when applied.

Change vulvar pad as often as necessary, *i.e.*, before it becomes saturated with blood, sometimes every hour, for a few hours; after one day, every four to eight hours for a week.

When changing pads, wash the parts with a bichloride solution for seven days, and with soap-water after seven days.

Give a cathartic on the evening of the day after labor.

Note the height of the fundus uteri, and keep the daily involution line.

Prop up on pillows the head and shoulders for a few minutes, twelve hours after labor, and afterwards three times a day for seven days. Allow patient to sit up and void urine on and after second day, if she desires, unless there has been a perineorrhaphy, in which case the nurse will be instructed by the attending obstetrician. Allow her to sit up in bed on and after the fifth day, if she desires. Do not allow her to get out of bed earlier than the tenth day, and not then if the fundus is still above the pubes, unless by order of attending obstetrician.

ECLAMPSIA BEFORE, DURING, OR AFTER LABOR.

Remove false teeth, if present.

Prevent patient from injuring herself; use several pillows as buffers.

Prevent her from biting her tongue, by covering an ordinary clothes-pin or large spoon handle with gauze, and holding it between the teeth during convulsion.

Darken room if possible, and keep the patient very quiet.

If there is much blood or mucus in mouth and throat, turn patient on her side, with head in a position to allow liquids to run out of the mouth.

HEMORRHAGE BEFORE OR DURING LABOR.

Keep patient absolutely quiet; elevate the foot of the bed.

THE NEW-BORN BABE.

Weigh the baby at once, anoint with albolene, examine the cord for bleeding, the head for meningocele, etc., the back for spina bifida, etc., the limbs for talipes and other deformities, the whole body for birth-marks, etc.; notice if babe turns blue, and examine for imperforate anus.

Bathe the babe as soon as convenient, and thereafter every day; apply dry dressing with boric acid over cord, remove this dressing and apply a new one after each bath.

If babe weighs less than five pounds, anoint with albolene and wrap in flannel or cotton wool, or both, taking care to keep it very warm until ordered by the attending obstetrician to wash and dress it.

Let babe nurse every six hours during first day, every four hours during second day, and every two hours for twenty minutes during third day and thereafter, except at night, when he should nurse at half-past ten, half-past four, and in morning, half-past eight.

Take the temperature twice every day.

Weigh baby before each daily bath.

Directions for House Physician.

Examine each patient on day of admission, especially as to condition of heart, lungs, and kidneys, and also general health, and record.

If there is any nasal or vaginal discharge, have a bacteriological examination made, and record the results.

Examine by abdominal palpation for position and presenta-

tion; also make external measurements by pelvimeter; record results as to both palpation and pelvimetry.

Examine specimen of urine furnished by nurse on day after admission, and every seventh day thereafter up to time of labor, and daily if there is headache, nausea, anasarca, or any other abnormal condition.

PREPARATION OF ATTENDING OBSTETRICIAN AND RESIDENT PHYSICIAN.

Cut the nails short; wash hands and arms in hot water, using green soap and nail-brush; cleanse well under and around nails; rinse in sterile water and then in a one-per-cent. solution of lysol or cresoline. Keep one of these solutions in a sterile basin on the small table beside the operator, and rinse hands from time to time. Put on operating-gown. The attending obstetrician may, and the intern must, wear rubber gloves in making vaginal examinations, which shall be as few as possible.

MANAGEMENT OF PATIENT IN LATTER PART OF LABOR.

Let the patient lie on her left side during the last expulsive pains, and let her turn on her back while the child is being expelled, or immediately after its delivery.

Keep one hand on fundus, press gently or irritate slightly with finger-tips, without using force.

After separation and passage into vagina, or after thirty minutes, endeavor to express placenta by pressure on fundus.

If placenta is retained, send for attending obstetrician, but in case of emergency, such as serious hemorrhage, introduce gloved hand and extract.

In all other cases of retained placenta, place a bichloride guard over vulva, and wait until an attending obstetrician arrives, but at the same time watch for hemorrhage.

Tie cord after pulsation has nearly ceased, or in five minutes.

Examine placenta carefully, measure, and weigh.

Report all injuries and tears of the soft parts to an attending obstetrician, who shall treat or instruct as to treatment.

MANAGEMENT OF PATIENT AFTER LABOR.

See that directions for the nurses are properly carried out.

See that patient gets a cathartic on the evening of the day after labor.

Watch carefully the uterus for involution.

Keep patient in bed not less than nine full days.

DIRECTION FOR CASES OF EMERGENCY.

Eclampsia.

Use mouth-wedge at once.

Give hypodermic of morphine at once, half-grain, also another hypodermic, quarter-grain, in half an hour, and a third hypodermic in one hour if convulsions are not controlled in the meantime.

See that patient is kept very quiet, and protected from cold and drafts.

If the patient becomes conscious, give calomel, 3 grains, as soon as possible, and magnesium sulphate, 2 drachms, every half-hour.

If not effectual within two hours, order, 1, 2, 3 enema (Epsom salts 1 ounce, glycerine 2 ounces, water 3 ounces), and also continue salts by the mouth until bowels are well moved.

After bowels are evacuated, administer high enema of salt solution, one pint every hour until three pints are injected, or use colon irrigation, if directed by attending obstetrician.

Apply hot packs on kidneys.

HEMORRHAGE BEFORE OR DURING LABOR.

Keep patient absolutely quiet.

Elevate foot of bed.

Give hypodermic of morphine, quarter-grain.

Repeat hypodermic of morphine, quarter-grain, in fifteen to thirty minutes if necessary.

Give adrenalin 1-1000 solution, M. 10 by mouth or M. 5 hypodermically. If serious bleeding continues, and membranes are unruptured, plug the vagina, keep pressure over fundus uteri, and give three salt solution enemata, one pint each, at intervals of one hour.

HEMORRHAGE AFTER LABOR.

Massage fundus uteri so as to express clots.

If uterus cannot be well contracted, and hemorrhage is alarming, introduce the gloved hand into uterus, clear out clots, and irritate uterine walls with finger-tips, and massage externally.

If the uterus is well contracted, and serious hemorrhage continues, look for bleeding-points in lacerations of perineum, vulva, pelvic floor, other parts of vagina, and cervix.

USE OF FORCEPS.

No house physician shall use the forceps without the permission of an attending obstetrician.

Do not apply the forceps until the cervix, vagina, vulva, and perineum are dilated and softened.

After dilation, apply the forceps within three hours in primiparæ, and within two hours in multiparæ, if nature has not completed delivery.

In using traction on handle attached to traction-rods, pull intermittently, and if considerable force is required, occupy not less than twenty to thirty minutes in delivering the head, taking the time from a watch or clock.

As soon as the head commences to press on the pelvic floor, remove leg-holder and allow extension of the thighs, etc., allow legs and thighs to hang over the end of the labor-table.

THE USE OF ANESTHETICS.

No house physician shall administer an anesthetic without the permission of an attending obstetrician.

In all serious operations, and in all operations on patients in a serious condition from disease or other cause, an official anesthetist shall administer the anesthetic.

The term "attending obstetrician" refers to the individual members of the visiting Burnside staff, and to all physicians who have charge of patients in the private wards.

All obstetricians in charge of private patients are requested to observe these rules.

Examine every male child on the seventh day after birth, to ascertain the condition of the prepuce. If found adherent, "strip" the glands, and secure, if possible, a prepuce freely movable. If this cannot be done after using the prepuce-forceps, and a probe or director, report to an attending obstetrician, who shall see that circumcision is done if required.

During labor and the puerperium, record, or let nurse record, as far as possible, the following: Length of first stage, length of second stage, length of time before expulsive pressure is used over the fundus of the uterus, length of time of such pressure, total length of third stage, time of washing of vulva, time of application of abdominal binder, time of putting patient in bed, time of first weighing baby, time of first washing baby.

In forceps delivery, record when forceps are applied, when head is extracted, when body is expelled or extracted.

In all other operative procedures record length of time of operation.

Remarks.

When Solon gave laws to the Athenians, he was asked, "Are these the best laws you can frame?" He answered, "No; but they are the best laws that the Athenians can keep."

We have endeavored to profit by Solon's wisdom, and have tried not to frame rules that are too elaborate. The tenure of office of our nurses and house physicians is very short, and the frequent changes make the training of the staff somewhat difficult. We find that a printed set of rules, which are to a large extent similar to those used in other maternities, especially in the United States, is very serviceable in many respects. We have made our rules simple, and we hope they will prove useful for our young graduates.

We have considered for several years that it is difficult or impossible to keep the Kelly pad perfectly sterile, and we use it only to a limited extent. We therefore remove the Kelly pad after preparing the patient for labor, and place under the patient a clean draw-sheet and an absorbent gauze pad.

For many years we used no vaginal douche before or after labor in normal cases. Recently, however, we commenced the administration of the antepartal douche, as was the custom years ago in the Burnside. We do not use a douche of any kind after labor, unless there is some special indication for it.

Our rule as to the vulvar pad after labor is to change it as *often as necessary*, instead of every four or six hours, as was once our custom. Our aim is to change the pad before it has become saturated with blood, *i.e.*, before the bed-clothing has become soiled. Frequently changes, sometimes every hour, are generally required during the first twenty-four hours after the completion of labor.

We administer a cathartic earlier than we did a few years ago, with benefit, we think, to our patients. The height of the fundus is noted daily, and the involution line has been carefully kept on our ordinary charts for the last six years, according to the custom of Queen Charlotte's Hospital, London, England. The head and shoulders are propped up on pillows for a few minutes three times a day, to favor free vaginal drainage.

In cleansing the hands of the obstetrician, and the genitalia and adjacent parts of the patient, we have discarded alcohol, for two reasons. Its use involves considerable expense and some inconvenience, especially for the general practitioner who does not, as a rule, carry alcohol in his obstetrical satchel. So far as our observations show, we get along as well without it.

As to antiseptics, we still use the bichloride of mercury to

a large extent. We have used lysol for some years, and are now using cresoline to a limited extent. Professor Amyot, of Toronto University, conducted a series of experiments for us last winter, and found that the germicidal powers of lysol and cresoline were strong. They are both commercial preparations, somewhat similar in nature, being saponified cresol mixtures.

In fixing a time limit after the Dublin fashion, we do not mean that in all cases the operator should wait for two or three hours after complete dilatation before applying the forceps, but we do mean that he should never wait longer.

Our chief aim in making rules as to certain time records is to secure uniformity in methods of procedure. For instance, we don't want a muscular and strenuous house physician to pull the head over the pelvic floor and through the vulva in five minutes. We don't want him to guess as to time, but use his watch, or the clock on the wall beside him, so as to know what progress he is making in a given time.—*A. H. W.*

REPORT OF A CASE OF PRIMARY CARCINOMA OF THE LIVER.

By JOHN GERALD FITZGERALD M.B. (Tor.)
The Sheppard and Enoch Pratt Hospital, Baltimore, Md.

The history of this case is rather interesting, illustrating as it does how much progress an incurable disease process may have made without exhibiting any subjective signs and, in patients of the insane class, with very little subjective feeling of discomfort.

The patient, R. R., was admitted some ten years before her death, age 45; her family history being negative, no heredity, alcohol or syphilis. Personal history: Patient has been a seamstress, always worked hard and had constantly complained of various somatic disorders, but except for a condition of chronic constipation, she was really in fair physical health. Her hypochondriacal condition, with slight affect depression, necessitated her being committed to the Buffalo State Hospital, where she remained until the time of her death. Her mental condition slowly grew worse and she finally demented.

During the entire time of her residence in the hospital she continued to complain of various ills, but careful physical examinations failed to discover any cause for her subjective expression of malaise. She ate and slept well, adapted herself to the hospital routine and led an automatic, almost vegetative, existence. In November she complained of feeling very weak and she was ordered to bed, and on examination it was noticed that she was anaemic. A few days later she became markedly jaundiced. The skin of her face became quite yellow as did also the conjunctivæ. Constipation, which had been present for some time, became more marked, and when the patient had a stool it was of a very light clay color and bile was also demonstrated in the urine. Patient later complained of pain in the right epigastric and hypochondriac regions, the abdomen became distended and there was some dulness in the flanks.

The liver did not appear to be enlarged, the edge was distinctly palpable and no nodules could be felt. There was no enlargement of the spleen. A provisional diagnosis of hepatic cancer was made at this time.

About two weeks later patient developed a pneumonia on the right side which was only discovered when there was increased rapidity of respiration and pulse rate—there was no pyrexia and only slight coughing, no complaint of any feeling of distress in the chest. Patient died two days later.

The autopsy report is as follows: Body is well nourished—markedly jaundiced throughout. Rigor mortis not well marked—no post-mortem discolorations. Right lung pleura adherent

everywhere. Pneumonia—lobar in type, of the entire lung, with the exception of a small portion at the base. Left lung—a few pleural adhesions, lung normal otherwise. Heart—muscle soft and friable, the edges of the mitral orifice slightly thickened but competent, other orifices and valves normal. Aorta normal. The abdominal cavity contained a large quantity of bile-stained fluid. Spleen pushed back out of place by the apparently enlarged left lobe of the liver. Normal on section. Stomach dilated, pylorus free, no cancer nodules anywhere. Duodenum absolutely free, no signs of carcinomatous process, remaining portions of the gut also normal. Pancreas indurated but not carcinomatous. Uterus and ovaries normal. Kidneys somewhat swollen—capusules adherent, more on the right than the left. Markings indistinct.

Liver perhaps slightly enlarged, weight 51½ ozs., studded everywhere with yellowish, hard nodules which do not project above the surface of the organ, are about the size of an almond, have undergone no degenerative changes and merge into normal liver tissue. Anatomical diagnosis—lobar pneumonia, carcinoma of the liver (primary). Chronic interstitial nephritis.

The microscopic examination showed a thickening of the capsule and diffuse infiltration of the liver tissue by small round cells, the cancer cells were imbedded in strands of fibrous tissue, this connective tissue stroma being an accompaniment of the new growth.

The liver cells themselves showed many interesting changes—fatty degeneration, vacuolation, etc., others progressive changes, cells in various stages of mitosis. The cancer cells had invaded liver lobules in certain areas, the outline of the cells in places was very irregular owing to their being crowded aside by the neoplasm. Some liver cells contained large vacuoles, the nuclei also showed changes—a considerable number of giant forms with large masses of cromatin. The nuclei in other places were also undergoing mitosis. The increase in the amount of chromatin was also very conspicuous. The blood vessels showed very little change, some slight increase in fibroblastic tissue (this was inconspicuous)—newly formed fibroblasts and fibroblasts in various stages of mitosis being seen, but chiefly where the cancerous tissue was most in evidence.

An examination of the spleen and other organs failed to reveal any signs of a cancer growth, so by a careful process of exclusion we decided the growth was primary in the liver.

I have to thank Doctor Arthur Hurd, of the Buffalo State Hospital, for the privilege of reporting the case, and I am indebted to Dr. Joseph B. Betts for his kindness in assisting in the preparation of the material.

MEDICAL THOUGHTS, FACTS AND FANCIES.

By JAMES S. SPRAGUE, M.D., Sterling, Ontario.
Author of Medical Ethics, (Etc.)

"Read not to criticize, but to accept, to consider or reject."

I think it was Epectetus, who flourished during the first half century, A.D., who told us in good Latin the fact: "That appearances to the mind are of four kinds. Things either are what they appear to be; or, they neither are, nor appear to be; or, they are, and do not appear to be; or, they are not, and yet appear to be. Rightly to aim in all these cases is the wise man's task." Dear brother, write in large letters and not to be effaced these lines on the tablets of memory, for not only will they be monitors, but will remind you of perilous and unworthy motives which, if carried to the full fruition, grief and disappointment would have marked the issue. In no other learned profession do things appear in so manifold colorings, not that we are especially susceptible to well unfounded impressions and deductions, for we have been termed, and very wisely so, *easy marks* in business relations, and if applicable, certainly thus in other and many considerations that are not necessary to name.

Complicated, yet simple, as are the lines of the great Roman, whose life is guided, yet thinks it guided, scrupulously directed by his words. Different interpretations and even contrary reasonings will arise to many who may read these words of a philosopher, and in making this assertion I do not forget that Montaigue has told us "There is more ado in interpretating interpretations than in interpretating things, and more books upon books than upon all other subjects; we do nothing but comment one upon another." Self-study and the study of life's apparent riddles will help us to balance things. Observation is not all, but to experience,—and it alone to a great extent as the unerring guide, we look for the unfolding and clarifying of the mysterious, wilful, yet apparent contrarieties of life's devious courses.

Yes, appearances are deceptive at this date as when Hippocrates made the assertion. Things are not what they seem, and our regrets are, and they, no doubt, are yours, that they blur our remembrances when we reflect how easy marks we have been, and continually are, we studying the subject of things that are and then do not seem to be—really will-o'-the-wisp hunters—Meleagers, in fact—blind plodders, too often, for things which appear to be, yet are not—too many pipe-dreamers—too much evidence that the great "prerogative of mind" is abused and

we think, yet do not, if so, in a visionary manner and not as philosophers or careful thinkers, and too often are we influenced even, thoughtfully directed, in our insouciance in seeking the agenda et corrigenda.

Can each of us say, with Harvey: "My trust is in my love of truth and the candour of cultivated minds"? If so, do we observe these admonitions in our daily studies, when we accept as the classics the praises of a patented dope by an arch-enemy of medicine—even by one who treacherously states he is one of our flock, and his article appears in our journals?

This very day, even in five medical journals, I behold an attempt, an article, with carefully arranged words, entitled: "Another Phase of the Proprietary Question." Brother, if the four or five hundred medical journals of the United States and Canada were before you, you can read it, for it is evident the proprietary medicine companies' organization had the contract in its widespread publication. Read the article carefully, re-read it. It is needless to tell you that things in it are not as they seem, or really not as stated. Brother, such is the literature too often presented, and it is so seductive that, if you do not think, it catches you very badly and your pocket-book too, and, to give you fully the truth, we are evidently *easy marks* for the proprietary companies, and especially marked as such by druggists who chance to see our weakness in pharmacy. To be convinced, ask your druggist in reference to the last-named statements; ask him to give you his candid views, and if you are not too stubborn he will free your mind "from many silly notions," and you will regret you do not know pharmacy, for, if you did, few patent dopes would you prescribe, if not abandon. Read carefully the lines of Epectetus to confirm the worth, if worth there is, in this article, for these lines are *apologia mea*—the incentive. However, brother, if you are trying to enrich the proprietaries—who are no friends to honest medicine—you I have offended, and although demanding and wishing to extend all charity, and requesting the same in return, it is well, even advisable, for you to write in large letters the words of the old Roman, Epectetus, on the tablets of your memory, for "Rightly to aim in all these cases is the wise man's task" most assuredly.

"*Prudens advertit ad gressus suos stultaes divertit ad dolor.*"

With papers before me that announce the names of candidates for position as members of the Senate of Toronto University, I, only an adopted son, and really the possessor of no parchments to prove the fact of my enrollment among its lists of graduates, most painfully notice that of the fifty-two candidates only seventeen live outside the city of Toronto. It is gratifying, probably,

to the few, to notice that of the eight candidates in Medicine, only two are Extra Mural. The Victoria Alumni in Arts have one candidate, resident extra muros, the remaining candidates, nine in number, claim the metropolis as their address. I mention these interests as they are present and are in keeping with my text and illustrate that it *appears* as if Toronto University *was made* for Toronto, and its resident graduates, and the word *Provincial* not in evidence. However, things are not in this case what they appear to be, and it is time we, who unfortunately are not residents of Toronto, should realize that we M.D.'s, M.A.'s, etc., have rights that *are* and do not seem to be, and are entitled to the honors in the Senate of our Province's university. Who among us doubts these facts, even if careless or indifferent?

DIONIN IN DISEASES OF THE EYE.

By R. W. RUTHERFORD, M.B. (Tor.), Chatham, Ontario, Canada.

Dionin or Ethyl.—Morphin hydrochloride since its introduction a few years ago by Darier, of Paris, has become an important part of the oculists' armentarium. It is a powerful lymphagogue, producing marked chemosis of the ocular conjuntiva, and to this property its usefulness is due.

I have used it in my private practice for the past eighteen months and have obtained very excellent results. I will now record some eye conditions that are amendable to its therapeutic action.

Pain.—Every practitioner is well aware of the severity of the pain met with in some cases of iritis, irido-cyclitis, corneitis and glaucoma; and before dionin was heard of, I may venture to say that many of them have found it necessary to give morphine hypodermically to allow the patient a good night's rest. Not so much now. I am of the opinion that dionin in 2 to 5 per cent. solution, or as an ointment of the same strength, if used properly and at close enough intervals, will relieve the severest of eye pain. Some may think that cocain is just as effective, but it is not. Furthermore, it dilates the pupil and increases the intra-ocular tension, and is thus contra-indicated in acute glaucoma. The relief afforded the patient by dionin is also longer in duration than that got from other ocular analgesics, such as cocain and holocain.

Corneitis or Ulcer.—In this condition, by means of its powerful lymphagogic properties, dionin combined with atropine

relieves pain and hastens the absorption of the corneal infiltrate. After the ulcer is entirely healed, I have the patient insert into the lower conjunctival cul de sac a little dionin ointment, and then have him close his eyelids and massage the cornea by means of his fingers. I employ at the start, ointment 2 per cent., and gradually work up to 5 per cent. Let me emphasize here that the more recent the opacity the better the result.

Iritis and Irido-cyclitis.—In the acute form of these diseases dionin combined with atropine, besides relieving the pain, assists the latter drug in its dilatation of the pupil; a feature most desirable. In old cases of iritis, where posterior synechiæ are present, and there is also a plastic exudate over the pupiliary area, there is no adjuvant to atropine like dionin. It is also very useful in post operative iritis and irido-cyclitis.

Acute Glaucoma.—Dionin is said to lessen the intra-ocular tension of the acute glaucoma. My experience in cases of acute primary glaucoma has been very limited, but combined with atropine, I have used it with splendid results in cases of secondary glaucoma due to synechiæ.

In conclusion, from my experience, on account of its usefulness in iritis, irido-cyclitis, corneitis and opacities of the cornea, I think that dionin has already come to stay as one of our most valuable and useful ocular therapies.

Selected Articles

FACTS AND FIGURES OF END-RESULTS IN ONE HUNDRED CASES OF CONSERVATIVE OPERATIONS ON THE UTERINE APPENDAGES*

By W. P. Manton, M.D., Detroit.

One's point of view regarding any surgical procedure must be largely based on personal experience. A method which proves disastrous in the hands of one man and leads to its denunciation, may, under a more careful selection of cases, a keener perception of conditions present, and a more finished technique, give rise to brilliant results and unstinted praise.

The conception of the term "conservative," as applied to the conditions under discussion, may also vary with different operators and thus give rise to confusion. The definition accepted by the writer includes in its meaning all of those procedures directed to the ovaries and tubes in which the morbid process alone is removed, or so modified as to put these organs in the way of renewed physiologic health. This includes puncture and resection, but does not comprehend the breaking up of adhesions and the liberating of organs bound down by adventitious products.

From the above it is plainly evident that the question of benefits to be derived from conservative operations on the uterine appendages presents a problem difficult of solution, which can really be answered only to individual satisfaction.

If it is admitted that the ovaries have their place in the economy, not only as the source of ovulation for procreant purposes, but as purveyors of an internal secretion which is essential to the wellbeing of woman during the active period of life, then there can be no question as to the desirability and importance of preserving the whole or a part of these structures whenever the involving morbid process renders this possible. On the other hand, if it is assumed that beyond supplying the elements for the perpetuation of the race, the ovaries have no other function, their total ablation when diseased is clearly indicated. In the majority of cases of pelvic disease demanding operative intervention, the carrying out of conservative measures cannot be considered, the condition having either existed too long or being of such a nature as to prohibit the saving of even a fractional part of the organ

*From the Transactions of the American Gynecological Society, 1906.

involved. There remains, however, a fair percentage of cases in which the disease is limited, and in which the removal of the pathological process is possible without the destruction or ablation of the entire organ.

Whatever the attitude of mind regarding these matters may be, however, the ultimate results, whether the radical or the conservative operation be undertaken, are alone of value in determining the worth of either procedure.

In order to ascertain my own experience along conservative lines, I have taken one hundred cases from my note-books, the facts and figures from which I herewith submit.

Of the one hundred women there were:—

Single	30
Married	64
Not noted	6
	100

The following operations were done:—

On the Ovaries.

Resection.

Both ovaries in	17	cases.
Right ovary in	26	cases.
Left ovary in	13	cases.
	56	

Puncture.

Both ovaries in	22	cases.
Right ovary in	8	cases.
Left ovary in	14	cases.
	44	

In 19 women the ovary of one side was found to be so largely involved as to require removal; the right in 6 instances, the left in 13.

On the Tubes.

Resection.

Both tubes in	13	cases.
Right tube in	4	cases.
Left tube in	7	cases.
	24	

It was found necessary to remove 1 tube in 10 of the patients: the right in 4 and the left in 6 cases. The opposite side was left untouched or resected.

Results.—In the one hundred women the immediate results

were entirely satisfactory; that is, all the patients recovered from operation and were relieved from the sufferings of which they formerly complained.

The mortality was therefore nil, and the results temporarily perfect. The majority of these patients remained under observation for at least three months. Following this quarter-year, 61 are known to be well at the present time; 31 have been lost sight of; 5 are doubtful, complaining of pelvic pain, referable to the resected ovary, but in which no change can be detected on examination; and 3 have required a second operation for the removal of the conserved organ, which had undergone in each instance, further cystic degeneration. Of the 64 married women, 5, or 85 per cent., and of the 30 single women, 23, or 75 per cent., were well a year following operation.

Of 64 patients of whom knowledge was had a year or more following operation, 41 are married. Of this number, 6 (14 per cent.) subsequently became pregnant; 4 of these were delivered at term, 1 aborted at the third month, and 1 is still enciente.

From this limited number of cases it appears that the conservative operations performed on the uterine adnexa have been followed with satisfactory and permanent results in more than 60 per cent. of those patients still alive and traceable. It is quite possible that among the thirty-one lost sight of some may have relapsed and undergone operation at the hands of others. It is also equally possible that the majority have remained well and that some have borne children.

The results just noted demonstrate that the conservative surgery of the appendages, where it can be properly undertaken, is better surgery than total oblation, since it not only relieves from the suffering for which operation is undertaken, and restores the patient to her wonted health, but it maintains intact womanhood, which, in the single who may contemplate marriage, is a matter of no little comfort and importance, and renders in all the possibility of future pregnancy. From the foregoing I maintain that my own statistics and those of others show that the conservative surgery of the ovaries and tubes, having passed the experimental stage, has established itself as a legitimate and successful operation in all the conditions to which it may be properly applied, and that it should be the operation of choice in all instances during the child-bearing age where the diseased state of the organs admits of its employment.—*Surgery, Gynecology and Obstetrics.*

PATHOLOGY AND THERAPY OF LEPROSY.

By P. G. UNNA, M.D., of Hamburg.

Fortunately, the time has passed when leprosy was considered an incurable disease. Owing to the efforts of a few physicians, who were not satisfied to accept the verdict, a marked change has followed in the view taken of this affliction. At first, attention was directed only to the occurrence of spontaneous remissions in the course of leprosy, and the so-called cures were attributed merely to spontaneous improvements. Every physician who has made a study of leprosy knows, however, that these slight periodic remissions, seen for instance, with change of climate or after hospital treatment, are really retrogression. An energetic and successful treatment, on the other hand, results in a rapid and pronounced improvement, which can often be predicted in advance. The true value of the therapeutic methods at our command will never be underrated by him who has actually witnessed the sudden, beneficial effect.

Much has been accomplished for the better understanding of the disease, by its study in foreign countries. Thus, Ehlers and Cahnheim examined the lepers of Creta and found cured cases among them. Of greater importance still are the observations of Tonkin, who encountered many cured lepers in Sudon. He states that the incurability of leprosy has been proclaimed without sufficient investigation.

In the meantime, the reports of improvements and cures of leprosy in civilized countries have so multiplied that they can no longer be overlooked. Remarkable improvement or a cure after the use of chaulmoogra oil has been reported by many reliable authors throughout the world. Many cures have also been reliably reported to follow the use of balsam of Gurjun, mercurial preparations, strychnine, arsenic, salicylic acid preparations, ichthyol, airol, and chinosol.

Most authors agree upon the value of hot baths.

The external treatment introduced by Unna has been used successfully by others.

Even Armauer Hansen agrees that Danielssen has discharged many lepers cured from the Lungegaard Hospital in Bergen. The latter ascribes the cure in part to drugs, such as the salicylate of soda, in part to the good care possible in the hospital. Hansen himself, however, believes that we can do nothing to bring about a cure, and that the disease has healed spontaneously in the cured cases he has seen. This opinion is in marked contrast to the views of such excellent clinicians as Kaposi and Vidal.

Unna has treated sixty lepers in twenty-two years and has followed these cases from two months to twelve years. The lesions varied from the mildest form of nerve leprosy, free from bacilli and recognizable only to the expert, to most pronounced, universal nodes in the cutis and subcutis. Common complications were paresthesia, circumscribed muscular atrophies, affection of the nasal mucous membrane, and leprous eye diseases. Since all the cases exhibited skin lesions, the treatment was chiefly dermatological.

Every physician must confess that in treating leprosy he has a very difficult problem before him. Unlike syphilis, we do not possess a ready specific which will dissipate the lesions. Yet even with regard to syphilis, many cases might be cited where the constitutional treatment has little or no effect, unless preceded by an energetic external application. Some individual or local resistance is probably offered, possibly by the encapsulation of the virus or by a mixed infection, which prevents the action of mercury and the iodides. The leprous lesions closely resemble these torpid syphilides, and a number of factors are present which will explain their obstinate character. The invasion of the bacillus of leprosy does not give rise to symptoms of an acute inflammation, but, instead, there is a tendency to encapsulation, with simple hypertrophy of the fibres and part of the cells of the connective tissue. The lymph-spaces will become obstructed, so that drugs penetrate only very slowly. The bacilli themselves elaborate a fatty substance and are surrounded by a mucinous material (zooglea), containing some solid fat. This substance represents the dead and swollen germs. By means of a special staining method (Victoria blue and safranin), the living bacilli will appear blue-black, the zŏoglea mass golden-yellow. Some of the germs, however, also show a marked affinity for the yellow constituent of the stain, and therefore are most likely dead, even though they still retain their original shape. Probably a large percentage of the bacilli cast off by the patients belong to this class.

It follows from what has just been said, that our first attempts must be directed toward removing the mechanical obstacles present. The simplest way to attack the solid fat present in the bacilli and in the mucinous material, is by means of heat. Hot baths, particularly sulphur baths, have claimed popularity for ages. In certain natural springs of Japan and Roumania, strong acids (sulphuric acid) and iron compounds play an active part. Hot alkaline baths probably possess a better penetrating power, but the patients soon complain of heart weakness and general langour, and cannot stay in the water suffi-

ciently long. Moderately acid and ferruginous baths, on the other hand, are better tolerated. After many experiments, Unna now resorts to "ink-baths," extemporized by means of sulphate of iron and tannin. The initial temperature is 30 degrees C., and is gradually increased by the addition of hot water. The patients stay in the water one-quarter to one hour, according to the reaction. These baths are indicated in the intervals between inunctions, during conditions of weakness, with extensive paresthesia and vasomotor disturbances, particularly of hands and feet; in complicating joint affections, and lastly with desquamative anomalies (eczema, psoriasis, pityriasis). Hot douches or local baths may, under certain conditions, be substituted for the general baths.

Another way of applying heat is by means of the smoothing iron. This is especially indicated in discrete nodes, where inunction of the entire skin is not desired. Several layers of flannel are placed upon the skin and the iron is then firmly pressed upon the desired spot, as long as the heat is tolerated. Discrete embolic foci, which only give rise to a moderate reddening and increased resistance of the skin, will not yield so readily to any other simple method. In the presence of anesthesia, a burn may result, but this will heal rapidly after the application of camphor-gynocard, guttaplast.

The most intense application of heat, such as is possible by means of the Pacquelin, has only rarely been employed by Unna during recent years, since the removal of tuberosities by means of a sharp razor, down to the level of the skin, gives better scars and does not spoil the pathological material. The parts are first rendered anesthetic with ethyl chloride, and the bleeding is controlled with styptic powder and lecoplast. The dressing is removed the following day, the wound again sprayed, and then thoroughly cauterized. The frequent use of this method will shorten the disease and improve the cosmetic result; it is especially indicated in tuberosities of the face and hands. The fact that we possess an efficient application for the cure of spontaneous and artificial leprous wounds in the gynocard.-camphor guttaplast, should popularize this method.

The stoppage of the lymph-spaces and lymph-vessels by means of mucoid masses of bacteria is a serious obstacle for the penetration of our remedies. The simplest way of overcoming this condition is by means of pressure and massage. Massage by means of disinfecting oils is frequently practiced. Recent nodes will often disappear very rapidly after the application of a firm bandage, but one disadvantage of this method lies in the fact that the bacilli are often forced into the lymph-nodes and into

the blood. Invasion of the lymph-nodes is easily combated by injection of carbolic acid or by extirpation, and the inundation of the blood is often marked by a febrile reaction which probably destroys many germs. A certain number, however, will gain a foothold in the capillaries and thus give rise to new embolic foci which develop later into new nodes. It follows that the pressure should never be excessive and should preferably be combined with other antibacillary methods. The simplest is the pressure of the hot flat iron, mentioned above. The use of plasters containing strongly reducing drugs (pyrogallic acid, chrysarobin), or a gentle massage, can also be recommended.

Next to physical methods, the application of chemicals for the local treatment of leprosy is of importance. Owing to the fatty nature of the leprosy bacilli, it is but natural that alkalies should play an important role. The simplest way of using alkalies is in the form of the caustic paste, which is applied pure and then covered with zinc-oxide guttaplast. In large areas, as in leontiasis of the forehead, it is better to use a vaselin ointment containing 1 to 5 per cent. of the paste, and then to apply some pure paste in addition upon the raised areas. The cauterized skin will heal best with zinc guttaplast, until the secretion ceases, when camphor-gynocard; guttaplast should be substituted. The paste is also excellent for lesions of the mucous membranes.

The tendency to form keloids, seen so often after the use of alkalies, may be avoided by cauterizing with alkalies only the first time, and substituting carbolic or hydrochloric acid for the later applications; or else injections of thiosinamine may be given, or thiosinamine be employed locally in the form of soap or plaster. Thiosinamine is also indicated where the nodes are exceptionally hard and are imbedded in sclerotic portions of the skin or where the usual methods no longer affect the process, probably owing to encapsulation of the bacilli in hypertrophic connective tissue.

The most commonly employed external remedies which are supposed to have a specific effect upon the protoplasm of the bacilli after the removal of the fatty and mucinous zooglea, are pyrogallic and carbolic acids, resorcin, chyrsarobin, sulphur, and ichthyol. Unna's own experience is most extensive with pyrogallic acid, a drug which is certainly not indifferent but the toxic properties of which can be accurately neutralized by giving dilute hydrochloric acid in doses dictated by the degree of darkening exhibited by the urine.

The ointment commonly employed for general inunctions contains 5 per cent. pyrogallic acid, 5 per cent. ichthyol, and

2 per cent. salicylic acid. For a more local action, the pyrogallic and salicylic acids may be increased to 10 per cent. Instead of pyrogallic acid, the oxidation product, pyraloxin, may be employed. This has a similar elective, but somewhat weaker, action. Or an ointment may be used containing 5 per cent. pyrogallic acid and 5 per cent. green soap. Part of the acid will be converted into pyraloxin and the green soap will take the place of the salicylic acid. For circumscribed nodes the pyrogallol guttaplast may be substituted.

Resorcin is considerably milder than pyrogallol, and is especially indicated for women, children, and individuals with soft skin and with mild eruptions. It is chiefly employed upon the face in the form of the Pasta lepismatica, which is rubbed into the skin twice daily for one to two weeks. Since the resulting resorcin crust will exercise quite some pressure upon the skin, this treatment is hardly in place where the subcutaneous fat of the face still contains many bacilli. Here the bacilli should first be destroyed by means of pyrogallic acid. If it is desired to use resorcin also upon the rest of the body, about one-third of the surface is treated like the face; in the meantime the rest of the skin is prepared by daily washings with green soap or pernatrol soap, which softens the superficial layers. The original surface is then covered with zinc glue, so as to exclude it from further treatment. General intoxication has never been observed, but still, hydrochloric acid should be given internally.

Concentrated carbolic acid is an excellent, almost painless, caustic for superficial nodes. For deeper nodes and recent, embolic foci, the daily injection of a 2-per-cent. solution is preferable. If this treatment lasts weeks or months, hydrochloric acid should be given internally to counteract any intoxication.

Chrysarobin does not play the same role in leprosy that it does in psoriasis, as its action is more superficial. It is therefore indicated only in the mild erythematous and pigmented, flat, and tuberous neuroleprides. Since conjunctival irritation must be carefully avoided, it is best applied only to the lower extremities.

Sulphur, in the form of the zinc-sulphur paste, is an excellent remedy to hasten the cure of skin lesions induced by the stronger reducing agents.

Ichthyol is indicated in the following condition:

(1) Pure, with or without hydropathic applications, in the common edema and stasis of the extremities, in painful swellings of the joints, and in all vasomotor disturbances.

(2) As a mitigating agent in all ointments containing strong reducing drugs, such as pyrogallol, chrysarobin, and resorcin; as a mild, universal inunction, with salicyclic acid, in weakened individuals, and to remove pigment.

(3) As 5 per-cent. ichthyol-vaselin with or without zinc ointment or zinc sulphur paste, upon the mucous membrane of the nose.

(4) As 10-per-cent. ichthyol-collodion upon swollen glands and recent embolic nodes, together with carbolic injections.

(5) As ichthyol guttaplast upon painful joints and upon painful ulcers, either spontaneous or resulting from cauterization.

Internally, ichthyol is an excellent tonic in weak or emaciated patients. The daily dose is 1 to 2 Gm. (15-30 min.) in drops, pills, or capsules.

Another excellent tonic is camphor. Unna generally injects a syringeful of oleum camphoratum forte daily into the gluteal region. It improves the general condition and diminishes the tendency to form new emboli.

Camphor is used externally in the form of (1) camphor-gynocard. ointment in ulcers upon the nasal mucous membrane and upon the leg; (2) camphor-gynocard. guttaplast, as a general curative plaster in all wounds induced by other treatment.

The nearest approach to an internal specific is found in chaulmoogra oil (Gynocardia oil). It is better absorbed and causes less gastric disturbance if the saponified oil is used in the form of keratin-coated pills. Each pill contains 0.15 Gm. (2½ grn.) of oil, and the patients take 32 pills daily, so that they receive about 5 Gm. (75 grn.) of oil. If intestinal disturbances follow, a small amount of anesthesin and menthol may be added. (Pil. gynocard. mitig.) Some authors recommend subcutaneous injections of the oil, but these are generally painful and cause indurations and inflammations. A good method is to give fewer pills and to add some of the oil to the daily camphor injections. The oil may also be given in the form of clysmata with milk; 5 Gm. (75 grn.) are thus introduced into the rectum every evening after an irrigation. In bad cases, two enemata may be given a day.

Salol or aspirin often does good service in painful conditions, such as neuralgias and joint affections.

Of the four internal remedies mentioned, chaulmoogra oil probably possesses a specific action upon the protoplasm of

the bacilli, while ichthyol and camphor act as tonics. Unna's experience is not sufficiently large to form an opinion of the action of the salicylic acid prepartaions, gurjun balsam, arsenic, the mercurials, chinosol, airol, etc. Strychnine, however, is excellent in extensive anesthesia and involvement of the nerves.

Other accessory remedies are the salicyl-cannabis and salicyl-creosote guttaplast, where there is a much thickened horny layer over the nodes, and to remove the callous edges of indolent ulcers. Applications of Merck's 30 per cent. hydrogen peroxide (perhydrol) or washings with pernatrol soap (2 to 25 per cent.) have the same action and also destroy pigment. The pigment is also affected by the ungt. bismuthi oxychlorati, and where it is desired to remove erythematous patches, 2 to 5 per cent. of fluid extract of rhubarb may be added.

Marked cyanosis of hands and feet calls for the use of local hot baths containing mustard flour or of poultices made of it.

The destruction of bacilli by the various caustics can be followed on pathological preparations by means of the Victoria blue-safranin stain. In parts cauterized with the caustic paste or with potash, almost all the bacilli, except in the deeper tissues and laterally, are yellow. The same may be found in areas treated with carbolic acid and heat. After the use of strong mineral acids, on the other hand, the greater number of bacilli are still blue, showing that they still retain the substance which has an affinity for the Victoria blue, even though they need not necessarily be alive.

Cures by the external treatment have been doubted, as the leprous nodes in the internal organs are not taken into consideration. Unna had occasion to examine the lymph-nodes of two cases which had been actively treated, and to his astonishment could not detect any bacilli, even though the nodes were swollen. No doubt the same thing may occur in liver, spleen, and testes, for the external remedies employed are not limited in their action to the skin, but also enter the system. His cure is therefore not a strictly external one, but is both external and internal. The rapid general improvement certainly speaks in favor of this view. It has also been stated that the use of such drugs as pyrogallic acid is liable to set up serious renal disturbances, particularly since, according to Lie, 40 per cent. of all lepers already show traces of albumin in the urine. In reply to this, Unna states that he has had occasion to examine histologically seven kidneys from patients who had died of leprosy. They were not only free from bacilli, but actually showed no lesions whatever.

General Rules for Treatment.—

1. Treat locally and generally every day. No intervals should be permitted.

2. A change in the general plan of treatment is therefore only indicated when the improvement does not continue.

3. The external treatment should never be discontinued as long as there are still lesions of the skin or mucous membranes present.

4. The internal treatment should be continued for years after the external symptoms have disappeared.

5. A short, energetic treatment, even if accompanied by visible effect, is of no value.—*Merck's Archives.*

Editorials.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

The Nineteenth Annual Meeting of the American Association of Obstetricians and Gynaecologists was held at the Hotel Havlin, Cincinnati, September 20, 21 and 22, 1906.

There are certain incidents in connection with the organization and subsequent history of this admirable association which are sufficiently interesting to be worthy of regard at the present time. In the year 1886 it was decided to form a Congress of representative physicians and surgeons of the United States. Preliminary invitations were sent to the various special societies asking for co-operation. The American Gynaecological Society was the only one which refused to co-operate. In the official report of the Society for 1887 we find the following words: "The proposition to become part of the American Congress of Physicians and Surgeons was not adopted." The promoters of the proposed confederation were naturally disappointed because they desired a representation of the important subjects of Obstetrics and Gynaecology. As a consequence of this disappointment there was a conference of some friends of the Congress. As the result of such conference the American Association of Obstetrics and Gynaecologists was organized, not in opposition to any other society, but rather in the interest of the new Congress. After the organization was fairly completed a formal application for admission was sent to the Congress. In the meantime, however, a change had come over the society which had formerly opposed the proposed Congress. We were not told whether this marvellous change was brought about in consequence of the organization of the new society; but it was certainly a singular coincidence that the applications from the old Gynaecological Society and the new association of Obstetricians and Gynaecologists for admission to the Congress were practically made at the same time. After some deliberation by the executive authorities of the Congress it was decided that the society which had shown pronounced hostility to the Congress up to the time of its sudden conversion should be received, and that the

new organization which had been formed to assist the confederation in a serious emergency should be put on trial for a couple of years. In accordance with this remarkable decision the following resolution was passed: "Resolved that it is the sense of this Executive Committee that they will not consider the application of any society which has not held at least two annual meetings."

The new association entered into its period of probation with feelings of both surprise and disappointment, but with hopes that its work would be judged on its merits, and duly recognized at the proper time. After the second annual meeting the volumes of the transactions for two years were duly filed. After the third meeting, which was held in Philadelphia, twelve copies of each volume of transactions were asked for. This meeting was so successful from every point of view that it was supposed the perusal of the transactions would strengthen any favorable impressions which had been created by the former two. The delay was to some extent embarrassing because the association was unable to announce definitely the time and place of the fourth meeting. The third volume was completed as soon as possible, and the thirty-six books were forwarded to the Committee of the Congress. When all the evidence was received the committee did not arrive at a conclusion suddenly or rashly; they took ample time for deliberation, and while they were deliberating the new Association was waiting.

After about seven months the Executive Committee of the Congress of American Physicians and Surgeons was held in Philadelphia, and shortly afterwards sent an official intimation to the new society, stating that it would not be admitted to the Congress.

This is a brief but plain statement of one of the most extraordinary transactions known to medical history in North America. Why was the new association accorded such treatment? This question was asked by the president of this association fifteen years ago, and has not yet been answered. There was at that time a rumor in the air that the general argument used against the new association was that it really represented

nothing more than a duplication of the work of other sections, and for that reason should not be admitted.

This statement of the position is taken from the address of the president of 1891. With reference to the "duplication of the work of other sections," the president spoke as follows: "I have nothing to do with such an argument, and care not whether it be considered good, bad or indifferent. I shall remove the necessity of using it by saying that we concede that the Congress has a perfect right to refuse to admit us if its members thought fit. We insist, however, that it had no right to subject us to humiliation such as this. It had no right to place us on probation for an extended period, and then absolutely ignore the essence of the implied contract between them and us. The resolution of the Congress required certain things from us. We have fulfilled those requirements in every part. We actually came into existence in the interests of the Congress. We have supported it loyally in every particular. We have shown no particle of antagonism to any of its sections; we have patiently submitted to much inconvenience through the delay in sending its singular ultimatum. Is it possible that the majority of the members of that great organization will feel proud of the actions of their Executive? I have considered the matter in all its aspects, and I cannot conceive how the members of the Congress can reasonably defend the methods of their committee."

The president then spoke as follows respecting the future prospects of the association: "Well, gentlemen, what are we to do now? It gives me unbounded pleasure to assure you that our Executive Council holds no divided opinions. The necessities of the case compel us to bid the Congress a sad farewell, but in doing so we indulge in the hope that we may be permitted to continue our existence, which we have found exceedingly pleasant, as well as extremely profitable. Our association is alive to-day, it is going to live, it is going to thrive, it is going to do a great work on this vast continent. I say this in no boasting spirit. I desire to assume no air of bravado. I feel fully impressed with the responsibility I assume when I say that we have a grand future before us. I, who have done so little for you, can express myself with greater freedom than can others

who have borne so nobly the burden of organizing this magnificent society. I have witnessed the efforts of our founders with profound admiration. I have watched their zeal, their devotion, their untiring energy, with a feeling of wonder. I have viewed their boundless enthusiasm, their wondrous capacities for work, and their unselfish devotion to each other and our common cause with perfect delight. In addition it gives me great pleasure to refer to the dignified bearing of our councillors under somewhat trying circumstances. I know of no act on our part that will ever bring a blush of shame to any of our members. It appears to me that our prospects were never brighter than they are to-day. The object of our association, "the cultivation and promotion of knowledge in whatever relates to abdominal surgery, obstetrics and gynecology," is ever kept in view by one and all, and the results in three short years, the evidence of which may be found in the three volumes of our transactions, will inspire us with confidence and fill us with hope in the future.

"Let it be our duty as well as our pleasure to worthily continue the work which has been so auspiciously begun. Let envy, hatred and all uncharitableness toward other societies be ever kept far from us. Let us forget the indignities which have been heaped upon us. Let our memories of the past pertaining to our own work ever remain as pleasant as they are to-day."

Has the society realized the somewhat lofty expectations thus expressed? It would seem not unprofitable to consider some of the features of the meeting held at Cincinnati. One noticed very soon that the "old guard," the founders, are still on deck and ever ready for action. Among the founders present were Potter, Price, Carstens, Hill, McMurtry, Reed, Taylor and others. The able and active secretary has a genius for organization and executive work, and looks quite as young as he did fifteen years ago. McMurtry, Reed, Price, and Carstens show no signs of getting old, they are as vigorous, keen and alert in debate as ever. Among others present were a number who joined shortly after the organization of the society and are still active members, such as Ross, Hall, Longyear, Murphy, Morris, Ricketts, Zinke, Hayd, etc.

We learn that others of the founders and members had

expected to be present, but were prevented by unforeseen circumstances. There is also much new and young blood. To one attending the session of the first forenoon there appeared in the chair a boyish looking fellow with a clean-cut man's face. Who is that? He is the president, John Young Brown, a Kentucky boy, born in Louisville, a son of one of Kentucky's ablest Governors, now one of the leading surgeons of St. Louis. After a time a well groomed boy with an intelligent man's face takes the chair. Who is that? He is another Kentucky boy, now in New York, one of the vice-presidents. These men presided with a grace and dignity that was altogether admirable.

The association has shown much wisdom in holding out the glad hand to bright young surgeons and obstetricians, and bringing them into the fold.

The meeting lasted three days of two sessions each, morning and afternoon. The attendance was large, the room being filled most of the time. It is impossible to give a condensed report in the space at our disposal which would give any adequate conception of the character of the papers and the discussions. Some of the papers were far above the average, and some of the discussions were extremely good, and were listened to with breathless interest by those present. There was a general consensus of opinion that the meeting was one of the best that the association has ever known. One may go, perhaps, a little further, and say, without any fear of contradiction on the part of those in attendance, that it was one of the best medical meetings ever held in North America.

One cannot speak too highly of the work done by the Committee of Arrangements, of which Dr. Bonifield was chairman and Dr. Tate was secretary. One can also positively state that the unbounded and generous hospitality of the resident fellows will ever be remembered by those who had the privilege of attending this great meeting in Cincinnati.

In conclusion I may answer the question as to "lofty expectations" by saying that, although I feared that the enthusiasm of the president of fifteen years ago was causing him to soar a little too high, I now think, after attending this meeting, that the

results have fully justified his statement: "The association is alive to-day, it is going to live, it is going to thrive, it is going to do great work on this continent."—*Adam H. Wright.*

INTERNATIONAL TUBERCULOSIS CONGRESS

The next International Tuberculosis Congress will be held at Washington in 1908, that is about two years from the present time.

We understand that the American National Association for the Study and Prevention of Tuberculosis has already outlined a general plan for the arrangements of the meeting. In the first place, it assumed the task of collecting $100,000 towards the expenses. It started with the rule that the minimum subscription was to be $5,000, acting on the belief that it would be an easy matter to find twenty citizens of the United States who would be willing to subscribe such an amount. We believe that this amount has been practically collected now.

It is hoped that the committee will thus be enabled not only to pay the ordinary expenses of the Congress, but will also be able to award substantial prizes to the authors of the best papers on certain selected subjects, such as Sanitoriums, Treatment, Municipal Control, etc.

It is also proposed that the Congress shall officially last three weeks. This arrangement will be made chiefly in the interests of those who come from the Eastern Continent. It is expected, however, that only the middle week will be devoted to scientific meetings and discussions, and that the first week will be spent by the visitors in exploring some of the greater cities north of Washington, and that the third week will be spent in visiting certain cities south of Washington. Arrangements will probably be made in all these cities for a formal reception to the visitors.

The great desire of the people of the United States is to show both public and private hospitalities to all the visitors. In making such arrangements they think that there may be many visitors who can reach Washington before the date of the scien-

tific meetings and would have to leave immediately on their termination, while others might have considerable time to spare for such visits during the week after the close of the scientific meetings.

NEW PROVINCIAL BOARD OF HEALTH.

The Board of Health for Ontario, which simply takes the place of the old Board, which went out of office last month on account of expiration of time, is composed as follows:

Dr. Chas. Sheard, of Toronto; Dr. Milton I. Beeman, of Newburg; Dr. Jno. W. S. McCullough, of Alliston; Dr. Chas. B. Coughlin, of Peterboro'; Dr. W. J. Robinson, of Guelph; Dr. W. R. Hall, of Chatham.

Dr. Sheard has been Medical Health Officer of Toronto for several years, and is also Professor of Preventive Medicine in the Medical Faculty of the University of Toronto. He graduated from Trinity University in 1878. Dr. McCullough graduated from Trinity in 1890, and since that time has been in active practice in Alliston. He is at present a member of the Board of Examiners of the Ontario Medical Council. Dr. Beeman graduated from the University of Toronto in 1873, and has taken an active interest in matters pertaining to public health for many years, and has been for some time Medical Health Officer of his district. Dr. Coughlin graduated from Trinity in 1890, and after practicing for a short time in Ayr went to the city of Peterboro'. Dr. Robinson graduated from the University of Toronto in 1883, and has been Medical Health Officer of Guelph for some years. Dr. W. R. Hall graduated from Detroit Medical College in 1878, and became a member of the College of Physicians and Surgeons in 1884. He has been Medical Health Officer at Chatham for a number of years. Dr. C. E. Hodgetts, of Toronto, is the permanent Secretary of the Board.

We have reason to believe that the personnel of the Board will give general satisfaction to the profession of Ontario, although many of us would have preferred to see two or three members of the former Board reappointed.

THE BRITISH MEDICAL ASSOCIATION.

The British Medical Journal expresses its pleasure concerning the large attendance of Canadian physicians at the Toronto meeting, and hopes that the membership of the Association may be permanently increased in the Dominion. As a result of the large attendance of Canadians at Toronto the membership is for a time being increased by several hundreds. We are told that a similar increase occurred as a result of the Montreal meeting in 1897. Increased membership at that time was not maintained in anything like its entirety, and we fear that it is not likely to be this year. At the same time we hope that the increase in membership will be fairly substantial.

The Journal thinks it would be very much to the advantage of the association if its organization in Canada could be placed on a solid and permanent basis. The relationship between Canada and Great Britain as to this great association has been discussed many times in various parts of the Dominion. It was hoped by some that the Province of Ontario would take an important step in the way of bringing us closer to Great Britain by making the Ontario Medical Association a branch of the British Medical Association. Our provincial society showed by its action at the annual meeting of 1905 that it is not disposed to take this important step at the present time.

It seems to us, however, that there is reason to hope and believe that the permanent increase in membership will take place from one decade to another, and the officers of the association should not be discouraged in this regard when a number of new members drop out, as they certainly will, at the end of this year.

NOTES.

Toronto General Hospital House Physicians.

There was a very interesting reunion of the Hospital Staff of the Toronto General Hospital Monday afternoon, August 20th, when over one hundred ex-members and members of the Resident Staff from different parts of Canada and the United States met on the Hospital Grounds.

There were only two House Physicians in 1872, while there

are sixteen now. During the thirty-four years of the existence of the Hospital there have been 156 Resident Physicians, of whom sixteen are dead.

The following had charge of the preparations in connection with the reunion: Executive Committee—Dr. R. B. Nevitt, president; Drs. W. P. Caven, of Toronto; J. McAlpine, Lindsay; James Third, Kingston; A. E. Ardagh, Orillia; R. Hillary, Aurora; T. Middlebro, Owen Sound; J. H. Mullin, Hamilton; George Atchison, Galt; D. Armour, London, Eng.; L. Barker, Baltimore, vice-presidents; Drs. J. F. W. Ross, H. A. Bruce, P. E. Doolittle, W. B. Hendry and W. N. Barnhardt, all of Toronto, councillors; Dr. J. N. E. Brown, secretary-treasurer.

On the evening of the same day the members held a banquet in the building of the Royal Canadian Yacht Club, Toronto Island.

Interesting Bowling Match.

Among the most interesting of the games played during the recent visit to the bowlers from Scotland, England and Ireland was that known as the Veterans' Match, between four from the Old Country and four residents of Toronto.

The visitors were driven to the Victoria Rink, Toronto, on the morning of August 1st and were introduced to the Veterans of Toronto. Mr. Campbell, of Scotland, and Dr. Jas. H. Richardson, of Toronto, being each 83 years of age, were requested to settle between themselves which of them was entitled to be called the oldest active bowler in the world. The request was soon decided by Dr. Campbell gracefully withdrawing his claim in favor of Dr. Richardson. This means, then, that our dear old friend, Dr. Richardson, is the oldest active lawn bowler in the world.

The following will show the names, aggregate ages of the bowlers, and the result of the game:

TORONTO.	OLD COUNTRY.
Dr. Richardson,	William Kerr,
Jas. Spooner,	Peter Campbell,
John Bain,	D. Willox,
J. S. Russell, skip.....17	Adam Lilly, skip.....27

Aggregate ages—British, 283; Toronto, 324.

Personals.

Dr. Franklin Dawson, of Toronto, has removed to 633 1-2 Spadina Avenue.

Dr. Brefney O'Reilly has returned to Toronto and commenced practice at 52 College Street.

Dr. W. A. Mearns, of Hanover, was married September 26th, to Miss M. R. Whyte, of Nottawa.

Dr. Chas. R. Dickson, of Toronto, returned from a trip to New York and Philadelphia, September 28th.

Dr. W. F. Mayburry, of Ottawa, was married September 25th to Miss Florence Graham, daughter of Dr. C. E. Graham, of Hull, Que.

Dr. Arthur Jukes Johnson, who went out to the Pacific Coast with certain members of the B. M. A., returned to Toronto, September 29th.

Dr. Frank Beemer, of the Hamilton Asylum, had charge of the Asylum for the Insane, Penetanguishene, during the absence of Dr. Spohn in September.

Mr. D. R. Wilkie, president of the Imperial Bank, has been appointed a member of the Toronto General Hospital Board, in the place of Mr. W .F. Maclean, resigned.

Dr. Herbert P. H. Galloway, who removed from Toronto to Winnipeg last year, has been appointed lecturer in Orthopedic Surgery in the Manitoba Medical College.

Dr. Perry G. Goldsmith, of Belleville, who has been for many years medical attendant at the Deaf and Dumb Institute of that city, has been dismissed.

Dr. Walter W. Boyce has been appointed to the position in the place of Dr. Goldsmith. The salary is $600 a year. We are told that Dr. Boyce had been an active Conservative worker. We hope this does not imply that a good medical attendant has been dismissed and another good physician has been appointed in his place simply for political purposes.

Dr. Alex. Hugh Ferguson, of Chicago, has been rewarded for eminent services to surgery a Commandership in the Order of Christ of Portugal. It is said to be the highest decoration the King of that country can bestow on anyone outside of royalty.

Dr. Ferguson is a native of Canada and received his medical education in Trinity Medical College, Toronto. He first commenced practise at Buffalo, but in a short time moved to Winnipeg, where he practiced until 1894, when he went to Chicago, where he has practiced during the last twelve years, devoting himself exclusively to surgery, with distinguished success.

Dr. Albert A. Macdonald, of Toronto, has left his former residence on Simcoe Street, and is now living at the house of his brother-in-law, Mr. Alf. Beardmore, St. George Street, where he will remain until his new house at the corner of Bedford Road and Prince Arthur Avenue is completed and furnished.

Dr. T. K. Holmes, of Chatham, had a narrow escape from death on the evening of September 26th. On returning from the north side of the river in the darkness he made a mistake as to the position of the bridge and fell into the water. He was able to swim to the pier and remained there until rescued.

Drs. Jas. F. W. Ross and Adam H. Wright, of Toronto, attended the meeting of the American Association of Obstetricians and Gynecologists at Cincinnati, September 20, 21 and 22. At the close of the meeting they went to Louisville, Ky., where they remained for three days, Dr. Ross being the guest of Dr. L. S. McMurtry, and Dr. Wright the guest of Dr. Horace Grant.

Obituary.

JOHN MATTHEW LEFEVRE, M.D., M.R.C.S. Eng.

Dr. J. M. Lefevre, a graduate of McGill University, and one of the most prominent medical practitioners in Vancouver, B.C., died September 15th, 1906, aged 53.

W. FRANKLIN EASTWOOD, M.B.

Dr. W. F. Eastwood, of Claremont, Ont., died September 17th, aged 46. He received his medical education in the Toronto School of Medicine, and graduated M.B. from the University of Toronto in 1882.

MINERVA M. GRENAWAY, M.D. C.M.

Dr. Grenaway, of 563 Church Street, Toronto, died at St. Michael's Hospital, Sept. 27th, after a short illness from a virulent form of typhoid fever.

She was educated in the Women's Medical College of Toronto, and graduated from Trinity University in 1899. She then took a post-graduate course in the Western Hospital, Philadelphia, and began to practice in Toronto in 1904. She had a very good knowledge of her profession, and was much beloved by her many friends.

Ralph Oliver Morris, aged six months, second son of Dr. E. Ralph Hooper, died at his father's residence, 415 Bloor Street West, Toronto, September 29th.

Book Reviews.

Surgical Suggestions. Practical Brevities in Surgical Diagnosis and Treatment. By WALTER M. BRICKNER, M.D., Chief of Surgical Department, Mount Sinai Hospital Dispensary, New York ; Editor, American Journal of Surgery, and ELI MOSCHCOWITZ, M.D., Assistant Physician, Mount Sinai Hospital Dispensary, New York ; Editorial Associate, American Journal of Surgery. Duodecimo ; 60 pages. New York: SURGERY PUBLISHING Co., 1906. Cloth, 50 cents.

This little book contains 250 suggestions grouped under proper headings and its contents is carefully indexed. While some of the items are familiar to the practical surgeon, they are presented in a manner that will impress them on the reader's memory. It will be much appreciated by the general practitioner, not alone on account of the value of its contents, but as an artistic bit of book-making.

Practice of Pediatrics, in original contributions by American and English Authors. Edited by WALTER LESTER CAER, A.M., M.D. 199 Engravings and 32 full page plates. LEA BROS. & Co., Philadelphia and New York, 1906.

This is one of three volumes covering respectively Gynecology, Obstetrics and Pediatrics, of the Practitioner's Library. It is difficult to speak too highly of the work, which fills a long-felt want in this department, and gives to the physician a short though comprehensive article on almost any subject he may require. In other words, it is a system of pediatrics in one volume of 1,000 pages. Nor are the wants of the student forgotten, for technic and method are constantly emphasized. The only fault to be found is that in the attempt to make the work complete, many pages are added on blood-counting, bacteriology, etc., which might with advantage be left to other text-books. The two English contributors, Drs. F. J. Poynton and Cline Riviere, write the sections on Circulatory and Respiratory Diseases respectively.

The Diseases of the Nose and its Accessory Sinuses. By H. LAMBERT LACK, M.D. (Lond.), F.R.C.S., Surgeon to the Throat Dept. of London Hospital and Lecturer on Diseases of the Throat to its Medical College (University of London), Surgeon to the Throat Hospital, Golden Square, etc. 124 illustrations. Longmans, Green & Co., Paternoster Row, London, New York and Bombay. 1906.

Although there are already many text-books on this subject, it is most refreshing to meet with one which leaves the beaten track of compilation and includes some original observations. It is interesting, too, to find a surgeon who gives his whole attention to one department of medicine, and yet who does not get the mental strabismus which comes from looking at that one thing too closely. Dr. Lack is eminently fair in stating the case of nasal trouble in relation to disease in other parts of the

body, and his views will be most acceptable to the general practitioner.

The crowning glory of the rhinologist is the diagnosis and treatment of sinus disease. It is safe to say that the chapter on this subject is not surpassed in the English language, and is perhaps the most masterly in the whole book. The section on Atrophic Rhinitis, which contains a description of a new and satisfactory treatment, is also worthy of commendation.

Although the book is quite complete, it makes interesting reading for those who are not devoting themselves entirely to rhinology, while to the specialist it is simply invaluable.

The Examination of the Function of the Intestines by means of the Test-Diet. Its Application in Medical Practice and its Diagnostic and Therapeutic Value. By Prof. Dr. Adolf Schmidt, Physician-in-Chief of the City Hospital, Friedrichstadt in Dresden. Authorized Translation from the latest German Edition. By Charles D. Aaron, M.D., Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine; Clinical Professor of Gastro-enterology in the Detroit College of Medicine; Consulting Gastro-enterologist to Harper Hospital, etc. With a frontispiece Plate in Colors. Crown Octavo, 91 pages, Extra Cloth. Price $1.00, net. F.A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The author's aim in this little monograph of about ninety pages is to bring before us a practical method for use in the examination of the intestinal functions. Schmidt devotes a chapter to the test diet which he and Strasburger used and found satisfactory, and then proceeds to the detailed examination of the faeces, with special stress on abnormal constituents and their relation to disease. The remainder of the work is devoted to an analysis of intestinal disturbances under headings of Gastro-, Hepato- and Pancreatogenic disease as well as those due to local and functional causes. The book is of especial value to the student of internal medicine and is somewhat unique. Schmidt has also throughout taken up therapeutic indications in a practical manner which adds greatly to its value.

A Short Practice of Medicine. By Robert A. Fleming, M.A., M.D., F.R.C.S., F.R.S.E. Lecturer on Practice of Medicine School of the Royal Colleges, Edinburgh; Assistant Physician, Roylal Infirmary, Edinburg. J. & A. Churchill, 7 Great Marlborourgh Street. 1906.

The author explains the reason for the appearance of this volume of 750 pages as due to the fact that though there are many excellent text-books there are few small-sized manuals, particularly for the medical student. It is consequently intended to be a time-saver, and " the student burdened with innumerable classes demands some guide as to what is necessary for the all-important examinations which lie before him, and such a guide is offered in the following pages."

" No attempt has been made to group together clinical features in tabulated form, because such tables are more useful

if drawn up by the reader himself, but a definite method has been followed where possible so as to aid the student's memory in mastering the clinical features of each disease."

Take it all in all, this text-book is really very fair, and no doubt as accurate in scientific detail as is possible in a volume of this size.

The author is a pronounced believer in the use of alcohol in many of the acute infectious and wasting diseases.

This manual might answer very nicely for a third-year student in a Canadian medical college, but those in the fourth year require a work much more comprehensive.

The Ear and its Diseases. A Text-Book for Students and Physicians. By Seth Scott Bishop, B.S., M.D., LL.D. Honary President of the Faculty and Professor in the Post-Graduate School and Hospital of Chicago; Surgeon to the Post-Graduate Hospital and to the Illinois Hospital, etc. Illustrated with 27 colored Lithographs and 200 Additional Illustations. Royal Octavo, 440 pages. Bound in Extra Cloth. Price, $4.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

The above is a profusely illustrated volume of about 400 pages, treating the subject in a plain and concise manner. A considerable section is devoted to the Anatomy; numbers of original sections and preparations are presented. The remainder of the book is a treatise on the various diseases encountered, special stress being laid on Mastoiditis; a chapter is devoted to the use of compressed air in treatment, the various operations are also fully described. The relation of the ear to general diseases, and Life Insurance receive due consideration.

Green's Encyclopedia and Dictionary of Medicine and Surgery. Vol. I. (Aachen to Brain). William Green & Sons., Edinburgh and London, Publishers. 1906."

The various articles are contributed by a large number of authorities, such well-known names as Lander Brunton, Risier Russell, Dudley Buxton, Rolleston, Ashley and many others of equal prominence are noted. The author, J. W. Ballantyne, M.D., F.R.C.P.E., has written the whole of the dictionarial and most of the minor articles.

The book is the first of a series containing in alphabetical order an elaborate and exhaustive repertory of information of all the branches of medical science, from simple definitions to extensive treatises; a few of the latter, such as those on anesthetics and the brain, being especially noted.

The system of cross-references used greatly adds to the value—it is simple and yet complete; one can also see at a glance at the commencement of the article a summary of the matter to be dealt with, a point of great importance to a busy practitioner; and it is intended to be to him a colleague, assistant and consultant so far as these parts can be played by a book.

Selections.

Generalized Blastomycosis.

C. Christensen, La Crosse, Wis., and L. Hektoen, Chicago (*Journal A. M. A.*, July 28), give detailed histories of two cases of disseminated blastomycosis. In both the onset was sudden and without the presence of any chronic external lesion that might be regarded as the primary localization. In the first case, the cutaneous and subcutaneous lesions developed simultaneously after an acute febrile attack, and suggest the lungs as the portal of entry of the infection. In the second case, the localization of the infection seems to have been in the deeper tissues before the subcutaneous invasion. The authors suggest the advisability of experiments to determine whether the organisms are easily conveyed by air currents when dry, whether they retain their vitality and infectiousness after drying and whether or not they are carried in minute droplets of sputum. The peculiar predilection for the skin possibly indicates an important avenue of escape of the germs, it may be to new hosts. The authors also suggest the possibility of infection of skin lesions by way of the blood current and not always, as seems to have been supposed, by direct implantation from without. No effective treatment has yet been devised. In these cases the authors tried a sterile vaccine prepared from the blastomycetic organism, with the idea of stimulating opsonic action according to the method of Dr. A. E. Wright. Unfortunately, the patients passed out from under their observation, leaving the hospital before any definite conclusion of value could be drawn as to the result of this treatment. Work is now being done to develop certain methods by which the effect of the blastomycetic vaccines can be tested *in vitro*, so as to furnish some guidance in the treatment of the disease.

Treatment of Loosened Teeth.

M. L. Rhein, New York City (*Journal A. M. A.*, July 28), distinguishes two classes of loosened teeth: 1. Those cases due to infection which has caused the spreading of pus so as to interfere with the pericemental attachment of the root to the alveolus. In these the more or less speedy removal of the infecting focus will usually restore the solidity of the tooth. Infection from dying pulp, difficult eruption, ligatures around the neck of the tooth, ill-advised separation of the teeth and other injudicious dental procedures are the most common cause in this class, and the

condition can therefore be considered a strictly localized disease readily cured by the removal of its cause. 2. Cases in which necrotic conditions prevail and the tooth becomes gradually loosened in its socket as it loses more and more of its peridental attachment. The condition here is the result of some form of malnutrition and is less amenable to treatment. The importance of ascertaining the cause in each case, therefore, is plain. Gingival pockets should be looked for and their extent ascertained. If they extend all round the apex of the root the pulp is probably dead and should be removed. If of slight extent, the question is more difficult and the pulp condition must be tested in various ways. The condition of the occlusion of the tooth must also be considered. Rhein speaks highly of the value of the X-ray in the diagnosis, but points out the need of care in the interpretation of the radiographs. In the second class of cases the general opinion is that the pulp has lost its physiologic characteristics, and its thorough removal when feasible is a well-recognized and satisfactory treatment. The X-ray has been suggested in these cases as a therapeutic method, but its real value is yet undetermined. The high frequency current in its various forms has also been used, and has, at least, the advantage of apparently lacking the dangerous qualities of the X-ray. In the treatment of these cases every possible pus focus must be removed, and one that frequently escapes observation is a root of multirooted tooth that has lost its entire attachment and remains as a necrotic appendage. Such a root must be removed without fail, and the best results can only be obtained by replacing it with a porcelain substitute, the technic of which Rhein has elsewhere described. About 85 per cent. of his cases thus treated have resulted favorably. When all other means have failed there remains the last resource of uniting loosened teeth together, or to healthy teeth. In all cases of loosened teeth of the second class, after the mouth has been brought into a comfortable condition this can only be maintained if it is followed once every month by careful prophylactic treatment by the dentist and dental nurse.

Opium in the Laryngeal Stenosis of Diphtheria (Therap. Monats.

Rudolph observes in the treatment of severe cases of laryngeal stenosis in diphtheria by serum that the addition of opium is of benefit. Tracheotomy and intubation are often performed wihch might have been obviated. He quotes three cases in support of his contention. First, he was called to a child two years old after the usual medical attendant had advised that tracheotomy

be performed in a hospital, which the parents refused to have done, even though so advised by Rudolph. He therefore injected Behring's No. 2 Serum, and prescribed 2 minims "tinct. opi." four times a day, or oftener if required. On the child waking from sleep it was given food, and although only four hours may have elapsed since previous dose, another dose was given if it did not quickly go to sleep again. After twenty-four hours the effects of the serum was shown by the membrane on the tonsil becoming loosened. The laryngeal stenosis became more noticeable, the breathing noisier, the indrawing of the sternum more apparent, especially when the child was not under the narcotic. Possibly the serum beginning to take effect gave rise to mechanical obstruction of the larynx. After about twenty-four hours there was no stridor; general improvement began, with speedy recovery. The other two cases were very similar. In one, where the patient's brother had died a few days previous after tracheotomy had been performed, symptoms of laryngeal stenosis commenced two days prior to his being called. Despite this, the treatment was quite successful. The author claims these cases prove his contention that the serum gave excellent results; but before any appreciable result was obtained, the patient's suffering was made bearable and the breathing easier by means of opium. The dose should be 1 drop for each year of the child's age.—*Treatment.*

Lumbar Puncture.

Lumbar puncture as a therapeutic and diagnostic procedure has come to stay. At present there is some retrocession from the enthusiasm which characterized its first introduction, and some contraindications have been formulated, notably those cases of long-continued increase in intracranial pressure such as occurs in cerebral tumor. In such cases where the communication between the cerebral and the spinal fluids is obstructed or obliterated the sudden relief of pressure may result in forcibly driving the medulla into the posterior fossa with a prompt fatal termination. In ordinary infections, hemorrhages and similar conditions, lumbar puncture is devoid of danger providing it is carefully porfermed. Hackenbruch (*Centralbl. fur Chir.*) has carefully formulated the steps in this procedure. Ordinarily puncture has been made between the third and fourth lumbar vertebræ, though it may be one vertebra higher or lower. He points out that it is simpler and easier if a short skin incision is made, and there is less danger of infection from organisms which are commonly present in the skin. The same care should be exercised in making a lumbar puncture that is followed in any ordin-

ary surgical procedure. The skin should be carefully cleansed and shaved over the site of operation, and the skin should be anesthetized by some of the infiltration methods. The opening in the skin need not be more than one-sixth of an inch. There is then introduced into the wound a needle furnished with a mandrel, which is removed after the needle enters the spinal canal, permitting the spinal fluid to flow out. The same precaution should be employed in spinal anesthesia. This latter procedure has deservedly fallen into some disuse since it was first advocated, but it still has its indications.—*Medicine.*

Local Analgesia In Ocular Therapeutics.

In lecturing on the old and the new in ocular therapeutics, A. Maitland Ramsay, surgeon to the Glasgow Ophthalmic Institution, mentions only dionin under the head of local analgesics. He says: Dionin is a derivative of morphine and in five-per-cent. solution is one of the most valuable agents which we possess for the relief of deep-seated pain—*e.g.*, in glaucoma, iritis, sclerotitis, etc. When dropped into the eye it causes at first a smarting and burning sensation, accompanied by chemosis of the conjunctiva and swelling of the lids. These symptoms are sometimes very pronounced and may alarm the patient greatly if he has not been forewarned of the probability of their occurrence and told that they speedily pass off. This lymphagogue property of dionin is intimately associated with its power as an analgesic, because only after a good reaction is there much relief of the pain. This property also explains its power in promoting absorption of inflammatory deposits in the cornea. Its action in this way, very satisfactory in itself, is greatly increased if it be used along with collargol. In the author's experience the best results are obtained when a five-per-cent. solution of dionin is instilled in the morning and a disk of ten-per-cent. collargol gelatin is placed in the conjunctival sac in the evening. He is satisfied that this method of treatment hastens the clearing of the cornea after an attack of ulceration or of interstitial keratitis.—*The Lancet.*

Diet in Renal Disease.

Bradford says that a rigid system of dieting is suitable neither for all kidney diseases nor for all stages of the same disease, and attention in determining the diet should not be directed exclusively to the condition of the urine, but other factors, such as the general nutrition of the patient, the presence or absence of dropsy, the degree of cardiovascular degeneration present, and the presence or absence of uremia, are all factors

that should be taken into consideration. In cases of true acute nephritis associated with considerable suppression of the urine, and in which the eliminating functions of the kidney are most seriously compromised, the diet should be reduced to the greatest extent possible, and in some cases of very acute nephritis it may be advisable to withhold all food for a few days. In most cases such starvation treatment is not necessary, but it is still essential to give as little food as possible, and it may be as well to restrict this to one or one and a half pints of milk, moderately diluted, in the twenty-four hours.

All meat extracts and soups should be avoided throughout the illness, as their nutritive value is low, and they contain numerous extractives and salts which can only act as irritants to the kidney. The amount of fluid given to these patients should also be strictly limited, especially if there is any tendency to dropsy or to the development of hydremic plethora, and the use of dilutents as diuretics should be restricted to the later stage of the malady, where, no doubt, much good may be derived by the administration of moderate quantities of fluid in order to promote the removal of debris from the renal tubules. In chronic renal disease, if complications such as uremia and dropsy are present, the dietetic treatment must be somewhat similar to that applicable to cases of acute nephritis, but owing to the long-continued character of the disease, restrictions cannot be carried to the same length as those suitable to the treatment of the acute malady. In chronic renal disease associated with dropsy, and particularly with increasing dropsy, a milk diet is also advisable, but in very chronic cases, in which the dropsy is moderate in amount and persistent for weeks or for months, a pure milk diet for prolonged periods. Such patients may be put on a milk diet of some three pints per diem, and if improvement sets in such a diet may be continued for three weeks, but it is probable that no useful purpose is served by maintaining such a diet for months, and a more solid diet with a minimum of common salt may often produce more beneficial results.

The improvement under a milk diet in chronic renal disease is often more spurious than real, the quantity of urine is seen to be increased, and the albuminuria to be apparently diminished; these are looked on as signs of improvement, when really all that has happened is that the diuretic action of the milk has led to an increase in the flow of urine, and thus the loss of albumin, although really the same, has undergone a percentage reduction. Attention should never be directed solely to the state of the urine, the general appearance of the patient and the body weight should be carefully observed. An increase

in dropsy frequently shows itself by a rapid increase in the body weight. The milk diet is not recommended as a routine measure for long-continued periods in chronic renal disease.—*Practitioner and J. A. M. A.*

Uric Acid Solvents.

If we analyze the various remedies that are recommended as uric acid eliminators or solvents, we find that nearly all of them contain two chief ingredients—*i.e.*, alkali and water; the idea being presumably to alkalinize the blood-stream, thereby rendering the uric acid more soluable and hence promoting its excretion. This in itself is not a bad idea, although it is an exceedingly difficult matter more than temporarily to change the reaction of the blood by the administration of alkalies by mouth, because the kidneys at once eliminate any excess of alkali. The idea, however, that alkalies given by mouth can in any way aid in dissolving uric acid concretions after they have once formed is, of course, preposterous. One might as well give ether to dissolve the fat of the body in obesity or acids to dissolve the calcium out of osteophytes, on the ground that ether or acids can dissolve fat or calcium salts in the test-tube; in other words, the fact that alkalies are a uric acid solvent *in vitro* does not mean that they can accomplish the same *in vivo*. The amount of ingested alkali that could reach uric acid deposits in the circulation would be so infinitesimally small that a solvent effect could not possibly be accomplished.

This criticism applies with particular emphasis to lithium preparations that are so popular in the treatment of uric acid diseases. In the first place so-called lithia waters contain only a few decigrammes of lithium carbonate to the liter; as they always also contain large quantities of other alkalies, only a very minimal amount of uric acid (according to Berthollet's law) would combine with the lithia, the bulk with the sodium and potassium salts, while at the same time most of the lithium would be promptly excreted as chloride, phosphate, and sulphate. Finally, lithium carbonate, which actually does readily dissolve uric acid in the test-tube, is immediately converted in the stomach into lithium chloride, a salt that possesses only slight uric acid dissolving properties.

Whatever virtues, therefore, the innumerable uric acid remedies and lithia waters may possess they owe to the alkali that they contain, but this alkali acts only mildly as a uric acid eliminator and not at all as a solvent of urate concretions; it acts chiefly as an antacid in acidosis, and possibly as a stimulant to the liver function. The water is probably the most

efficacious ingredient of these uric acid remedies, because abundant water-drinking combined with a rational diet, the details of which cannot be enumerated here, undoubtedly acts beneficially in most disorders in which metabolism is retarded and in which incompletely oxidized waste products accumulate.

Until we understand the real cause of gout and allied conditions, until we know which produces the symptoms that are popularly considered to be manifestations of a hypothetical uric acid diathesis, we can do no better than to treat the gastro-intestinal tract and the liver, to promote elimination, and give the patient the benefit of certain symptomatic and local treatment.

If alkali and water are to be used, and we know empirically that they are of some benefit, why not order our patients to drink a few quarts of water a day, to which may be advantageously added a teaspoonful or so of baking soda and a pinch or two of precipitated chalk? This would accomplish all that can possibly be claimed for their goods by promoters of a host of expensive mineral waters and the manufacturers of most of our well-advertised so-called uric acid remedies.—*Journal of the American Medical Association.*

Bacteriuria.

Bacteriuria, understanding by the term the presence of bacteria in the urinary tract above the compressor urethræ muscle, is, according to G. P. La Roque, a much more common condition than is generally supposed. Unless associated with suppuration it produces none of the symptoms of true inflammation in a healthy person, but such may follow in conditions of lessened vital resistance. Local symptoms, when present, are: Slight increased frequency of micturition, mild ardor urinæ, occasionally incontinence, and in children there may be nervous disturbances. If no abrasions exist, toxins are not absorbed. In many cases there are no subjective symptoms. The most common infecting organism is the Bacillus coli, and it is present in nearly all cases, often in pure culture. In some cases of typhoid bacteriuria it is absent. Alkalinity of the urine means the presence of the staphylococcus or Bacillus proteus vulgaris; all other organisms, these being absent, produce an acid urine. When the bacteria come by way of the kidneys, as in typhoid septicemia or scarlatina, there is always a positive albuminuria. When they enter from the genitalia or the lower intestinal tract, the presence of albuminuria is dependent on the previous condition of the kidneys. The history will probably suggest the causative germ. In treating the condition, urinary and intestinal

antiseptics, urotropin (hexamethylenamina), salol, boric acid, and large draughts of water are advised. Vesical instrumentation and irrigations are to be avoided so far as possible. In spinal disease with paralysis of the compressor muscle, bacteriuria is a constant attendant affection, and when the urine becomes ammoniacal, cystitis is inevitable. The danger to life in these cases from ascending urinary affection makes bacteriuria a serious matter, and everyone recognizes the value of thorough, gentle, aseptic bladder drainage in their treatment. In cases, as in the aged, dependent on colitis and constipation, free purgation, regulated diet and intestinal antiseptics are essential. Colonic lavage for two or three months is practiced by Janet. A case of very marked bacteriuria following dysentery is reported.—*Jour. A. M. A.*

Ichthyol in the Treatment of Angio-Neurotic Edema.

Angio-neurotic edema, designated by Schlessinger hydrops hypostrophos, is a serious disease, writes Frederick C. Forster, of West Southbourne, Bournemouth, because it may attack mucous membranes as well as skin, and sudden edema of the larynx may, therefore, occur and prove rapidly fatal, as in a case recorded by Morris. Tracheotomy was performed on three separate occasions for asphyxia due to edema, but the patient succumbed one night from a fourth attack before medical assistance could arrive.

Other cases have from time to time been recorded, notably one complicating enteric fever, reported by Drs. Martin and Gillies. The surgical importance of its viscereal crises has been demonstrated by Professor Osler, and instances given in which laparotomy was performed for angio-neurotic edeme of the intestine, the symptoms closely simulating an acute abdominal lesion.

A nervous, unmarried lady, aged thirty-seven, sought advice with an eight years' history of evanescent swellings, neither inflammatory nor dependent on any injury. They usually occurred at fortnightly intervals on the face, chest, and upper arms, lasting about two or three days, and then disappearing. They occasioned no pain, but only a sensation of tingling and slight soreness. No therapeutic measures tried had either ameliorated the attacks or lengthened the intervals between them. He ordered ichthyol, grn. iij, in pill form, to be taken thrice daily. This she continued for two months, then twice a day for another month, and at present she is taking one each day. She writes that for the past three months she has had no recurrence.

The author is not aware that ichthyol has been tried for this disease, but was led to prescribe it because of its efficacy in controlling the "flushings," "vasomotor neuroses," and allied phenomena which are common at the menopause, when the vasomotor system appears to be the escape valve for pent-up nerve storms.

Though there was no evidence of any climacteric change in the patient, ichthyol proved beneficial. The author says it is too early to claim that the trouble is more than checked. He considers ichthyol worthy of a continued trial. Where angioneurotic edema is accompanied by gastro-intestinal disturbance, ichthalbin (an albuminate of ichthyol) may be more easily tolerated.—*British Med. Jour.*

Typhoid Diagnostic of Ficker.

In all cases in which typhoid fever is suspected, M. Meyerhoff removes blood from a vein at the bend of the elbow and performs the Widal test with Ficker's typhoid diagnostic and the various pipettes recommended by him. The fact that in each one of nineteen cases the test was eventually positive, speaks well for the value of the method. In one case, the symptoms were typically typhoidal, yet daily tests never showed any agglutination; as soon as the paratyphoid-B diagnostic was employed, agglutination was strongly positive and the real nature of the disease was beyond doubt. The test is generally positive by the end of the second week, sometimes not before the twenty-first day. Agglutination was never obtained in cases other than typhoid, unless typhoid existed previously, as in one instance where the patient had been ill six years before. The reaction with the diagnostic is therefore in every way as good as that with the living bacilli, except that it does not enable diagnosis in the earliest stages of the disease.—Berl. klin. Woch., in *Merck's Archives.*

The After-care of the Consumptive.

In the antituberculosis crusade attention has been devoted to the means of preventing infection, the discussion of laws relating to notification and also to treatment of the tuberculous, particularly the establishment of sanatoria both public and private. There can be no doubt of the value of this movement and of the amount of good which it has already accomplished. There is another feature which has been given comparatively little attention, and that is the after-care of the tuberculous. In those who are well-to-do this problem is not difficult, but for the working man, and particularly for the working woman, th

problem of how to live after the disease has been arrested is one of paramount importance. Already the public is becoming fairly well educated on the main topics relating to tuberculosis, and the one that has sunk the deepest in the public mind is the feeling that tuberculosis is contagious; hence in the narrower field that is open to the employment of women, which is largely in a sedentary way and in comparatively close contact with others, the problem of occupation is all-important. For workingmen there is a much wider rangs of choice. The man who has been employed within doors can obtain work on the farm or in various out-of-door occupations, but the number of places open to women in out-of-door work is very limited. To return to the same surroundings under which the disease was contracted is almost certain to mean a recurrence. Discussing this one feature of the antituberculosis crusade shows how the problem of tuberculosis is essentially a sociologic and economic one. With the disease arrested it is highly important to discuss the question of after-care.—*Medicine.*

Recognition of Albumin Bodies in Urine.

T. W. Hastings, in *The Medical Record* (July 7, 1906), refers to the fact that the term albuminuria is loosely used to designate the presence of any albumin body in the urine which responds to the tests for albuminous material. It is possible to have in the urine several kinds of albumin bodies. The ordinary tests such as nitric acid, or this acid plus heat, may throw out nucleo-albumin. In order to test the presence of serum albumin, which is alone an evidence of pathological states, the best test is the use of a saturated solution of sodium chloride acidulated with 5 to 10 drops of 50-per-cent. acetic acid. Mix the urine with such a solution and boil the upper one-third of the urine. Any pathologic albumin will be precipitated. If this test is carried out in a routine way much more satisfactory and reliable results are reached than by the older methods of testing for albumin. It is important to examine the urine within six hours after it is gathered, otherwise the products of bacterial disintegration may interfere with moderate reactions for albumin.—*Medicine.*

Paget's Disease.

Hartzell (*Journal of Cutaneous Diseases*) describes two cases of Paget's disease treated by the X-ray. The first healed entirely, but this healing was followed by the development of a breast tumor a year after complete cure of the skin lesion. The second case ran an identical course, excepting the mammary carcinoma had not reached the same stage at the time of report.

Hartzell from a study of the current literature notes that excellent results seem to follow the use of the X-rays in Paget's disease. He personally believes that the careful, systematic and prolonged use of the ray may permanently cure disease of the areola and nipple, but that this agent has very little effect upon the epithelial proliferation in the ducts and in the alveoli of the mammary gland. He notes that the ducts become involved only after some considerable time; that if the X-ray is applied early and persistently there is some prospect of a complete and lasting cure. This when the ducts and glands are involved can only be accomplished by surgical operation.

Ravogli regards Paget's disease as a precancerous disease developing as an epithelioma and gradually involving the deeper layers of the skin.—*Therapeutic Gazette.*

Advice for Tuberculous Patients.

The following is from the recommendations of the Bellevue Hospital of New York:

Bathe regularly. Sponge your chest with cold water every morning.

Rest. Avoid all unnecessary exertion. Do not walk more than you are allowed. Sleep at least eight hours every night, and go to bed early. Never run; never get out of breath. Never lift heavy weights; never get tired. If you have to work, take every chance to rest that you can. Go slow.

Food. Eat plenty of good, wholesome food. Drink at least one quart of milk a day. Eat from three to six eggs a day, and take them raw if you possibly can. Eat slowly; avoid anything which causes indigestion. Keep your bowels regular. Do not drink liquor, wine, or beer. Do not smoke.

Medicine. Take no medicine without your physician's advice. Stop any medicine which upsets the stomach. Report regularly to your physician. Report immediately if you have indigestion, diarrhea, constipation, pain, increased cough, or hemorrhage.

Follow instructions carefully and exactly, and your chances of getting well will be increased ten times.—*Therapeutic Gazette.*

Infantile Scurvy.

Still is convinced of the superior potency of potato as an antiscorbutic, although it is not so suitable for prophylaxis as it is for treatment. It is usually tolerated well for a few weeks during the treatment, but it is more apt to cause digestive disturbance than is fruit juice, and therefore is less suitable for prolonged use as a regular addition to the diet. The potato is

prepared by boiling or steaming in the ordinary way with care to obtain a floury potato; the outer floury portion is then scraped off and beaten up thoroughly with enough milk to make a smooth cream, sufficiently thick to pour out of a jug rather heavily—potato 2 heaped teaspoonfuls (with average 2 dram teaspoon) to 1 ounce of milk; 1½ to 2 teaspoonfuls of this potato-cream are given three or four times daily; after two or three weeks the dose of this should be gradually reduced, and omitted altogether within four weeks from the commencement of treatment. The mode of giving the potato-cream is of some importance; most infants take it best mixed up with the ordinary food, but if this is done it should be mixed with a portion only of the food to ensure all of the potato-cream being taken, otherwise if part of the food is left the child does not get the full dose of potato. Occasionally it is taken more readily given separately; in either case it is often disliked at first, but Still has rarely had any serious difficulty in getting a child to take it. In addition, two teaspoonfuls of raw-meat juice may be given three or four times in the twenty-four hours, and sometimes one-half teaspoonful of orange juice two or three times a day, but any looseness of the bowels should make the physician cautious in adding this to the potato-cream, for diarrhea in infantile scurvy is a serious complication, as Glisson seems to have observed. At the same time, the child is placed on a diet of milk which has been heated just short of boiling point and diluted with water; the scurvy-producing "food" is, of course, stopped.—*B. M. J. and J. A. M. A.*

The Coated Tongue.

L. Kast (*Berl. Klin. Wochenschr.*)—The examination of the coated tongue as an index to gastric disorders, upon which formerly so much stress was laid, has now generally fallen into disrepute. This is probably chiefly due to the lack of evidence that the condition of the stomach can affect that of the tongue either by the direct ascent into the mouth of stomach contents to swallow capsules containing lycopodium powder. The mouth was rinsed with water that same evening and again the next morning. In over half the cases the mouth was found to be (in the absence of regurgitation, eructation or vomiting) or otherwise. Kast, however, has shown that such a process actually does take place. A number of patients, all of whom were free from regurgitation, eructation and the like, were made free from lycopodium in the evening but to contain it next morning. The conclusion may fairly be drawn, that in some cases stomach contents may gradually wander up the esophagus

into the mouth and form a coating on the tongue. In these cases the condition of the tongue may fairly be assumed to represent that of the gastric mucosa.—*Interstate Medical Journal.*

The Early Diagnosis of Gastric Carcinoma.

D. Maragliano (*Rif. Med.*) returns once more to the early diagnosis of gastric carcinoma by means of the method of precipitins. In view of further experiments and greater experience the method is becoming more clearly defined. One of he difficulties has been the variety of precipitates which may be obtained, and hence the necessity of fractional precipitation by which the non-specific and non-essential precipitins are excluded. In the first place, it is essential that the gastric juice should be rendered neutral; if it is acid, precipitation occurs readily. Broadly speaking, the various precipitates likely to occur when an immunized serum is added to the gastric fluid may be divided into four chief groups: (*a*) Albuminoids common to the organism as a whole, and corresponding to those contained in the blood; (*b*) albuminoids coming from the secretion of a wound, no matter of what nature; (*c*) albuminoids peculiar to the stomach, and due to epithelial desquamation or to inflammation; (*d*) the specific albuminoids of cancerous tissue. Obviously, therefore, the aim is to get rid of the groups (*a*), (*b*), and (*c*) by means of fractional precipitation and deal with group (*d*), which alone is of value in the diagnosis of cancer. The author then goes into details as to the exact method of preparing the immunized serum (goats are better for this purpose than rabbits), and the precautions to be observed in applying it for diagnostic purposes. Clinically the test has proved useful, and only requires wider application and further experience to estimate its proper value. The author believes that it is as likely to be useful as the Widal reaction in typhoid, and will give positive results long before the cancer could be certainly detected by the means at present at our disposal.—*British Medical Journal.*

Abscess of the Kidney in Convalescence from Typhoid Fever.

F. Stinelli (*Gazzetta degli Ospedali.*)—A man had typical typhoid fever. While delirious he fell out of bed and struck the ground on his right loin without injuring the skin. When convalescent, about the twentieth day of apyrexia, he began to feel a little pain in this spot. High fever followed and lasted two days. The fever recurred five days later and took a remittent form, rising to 104 degrees in the evening, with chills, and followed in the night by sweating. Two weeks after the onset

of the fever a painful non-movable swelling was found in the right lumbar region. The urine did not contain pus or albumin. An incision was made from the twelfth rib to the ilium and a perirenal abscess, and an abscess between the kidney and its capsule were found and evacuated. The fever at once disappared and recovery was complete in a month. The pus contained the typhoid bacillus.—*Medical Review.*

Thephorin.

T. A. Mass (*Therap. Monats.*) has made experimental investigations as to the value of the new diuretic agent thephorin. Thephorin is a double salt of theobromine and formic acid, and has a composition analogous to that of diuretin, but that in thephorin formic acid takes the place of the salicylic acid in diuretin. The drug was supplied to the author in the form of tablets, each containing 0.5 gram of thephorin, and also as a powder. It is easily soluble in water, especially in warm water, and forms a clear weakly alkaline solution, which becomes turbid with long keeping. The author has not tried the effect of thephorin upon human subjects, but he has injected it into rabbits and guinea-pigs, both when the animals were apparently healthy and also when nephritis with oedema had been artificially produced, in order to determine its general action, its toxic effects, the fatal dose as compared with that of diuretin, and its effect upon diuresis. The following are the conclusions arrived at: (1) Thephorin is relatively only slightly poisonous; the fatal dose lies between 0.8 gram and 0.9 gram per kilogram for the guinea-pig; the theobromine would seem to be the poisonous element, because the amount of it contained in the above dose is almost the same as that contained in the fatal dose of diuretin; (2) given in small doses, the action is a slightly irritant one, in larger and fatal doses there is general paralysis ending in death; (3) thephorin lowers the blood pressure, and at the same time increases the frequency of the pulse; (4) in sound animals diuresis is temporarily greatly increased, but the effect so quickly disappears that the whole quantity of urine passed in twenty-four hours is not increased; (5) in animals suffering from dropsy, the result of toxic nephritis, thephorin is extraordinarily effective in combating the symptom; for example, in one of the animals treated by thephorin the free fluid in the pleural and peritoneal cavities after death was only 48 c.cm., as compared with 90 c.cm. in the control animal; in another case the amount for the animal treated was 4 c.cm., as compared with 60 c.cm. in the control animal; (6) the dose of thephorin which is effective clinically is far smaller than the toxic dose;

over-dosing is to be avoided because it leads to inhibition of the action of the drug; the dose for clinical purposes should be the same as that of diuretin; (7) the coagulability of the blood is diminished by thephorin. It is thus seen that in thephorin we have a new preparation which, from its composition and from the result of experiments on animals, would appear to be well suited for clinical purposes, but how far it will replace older diuretics can only be judged from clinical observation.—*British Medical Journal.*

Oesophageal Symptoms in Aortic Aneurysm. E. Hirtz and H. Lemaire (Bulletins de la Soc. Med. des Hospitaux.)

and H. Lemaire (Bulletins de la Soc. Med. des Hospitaux.

A man, aged 55, was admitted into hospital on March 3, 1905. For four months he had been losing health and strength. For two months vomiting had followed nearly every meal. At first the vomiting occurred about an hour after meals, then it occurred earlier, and finally it took the form of regurgitation. After taking a few mouthfuls of food the patient had to get up in order to reject what he had swallowed. This always occurred in the case of liquids, but solids were often retained. Deglutition was not painful and did not appear to be difficult. The patient had not been obliged to diminish the size of the mouthfuls.

He looked cachectic and the conjunctivæ and face had a subicteric tinge. There was myosis without inequality of pupils. In the upper part of the epigastrium some deep and painful lumps were felt. On taking a glass of milk the patient vomited it after some seconds and in the meantime abundant salivation occurred. The urine was increased in quantity and contained a trace of albumin. The area of cardiac dulness was increased, especially to the left. The apex beat was in the fifth space outside the nipple line. There were a "*bruit de galop*" on the left side and a resounding second sound at the base. The arteries were atheromatous; the radial and femoral pulses were equal. Abundant salivation always followed the taking of food, but occurred at no other time. The patient complained of great thirst which he could not quench. The existence of painless œsophageal vomiting with abundant salivation caused stricture of the œsophagus to be diagnosed. The lump felt in the epigastrium seemed to point to malignant disease of the cardia. But the facts that the regurgitation followed closer and closer upon deglutition, and that the patient was not compelled to diminish more and more the size of the bolus, and that the regurgitation was almost selective for liquids, were not in accord with the existence of a progressive malignant stricture of the lower end

of the œsophagus. The hypothesis of pressure on the œsophagus by a mediastinal tumour was also entertained. On March 8, there was a severe attack of hæmatemesis; bright red blood was rejected without any effort of vomiting. Syncope followed and about an hour later a stool consisting of block clot was passed. Next day a similar attack of hæematemesis proved fatal.

Necropsy.—The heart was greatly enlarged and the aortic valves were indurated. The thoracic aorta was uniformly dilated to a diameter of more than 5 cm. At the diaphragm was a spherical aneurysm of the size of the fist and intimately adherent to the œsophagus into which it had perforated. The lumen of the œsophagus was but little contracted by the aneurysm. The left pneumogastric nerve was involved in the adhesions between the œsophagus and the aneurysm, and was exposed in the communication between them. The walls of the aorta were thickened and of calcareous consistence. The stomach contained an enormous clot. The kidneys were slightly atrophied and the capsules were adherent. The abdominal arota and the iliac arteries were a little sclerotic.

The case presents several points of interest. The patient complained only of digestive symptoms, œsophageal vomiting (regurgitation) and brief, but abundant, salivation after taking food. The latter appears to be an œsophago-salivary reflex. M. Antony has pointed out the existence of this reflex in cancer of the œsophagus. There were no signs of aneurysm. The survival of the patient after the first attack of hæmatemesis did not seem compatible with the hypothesis of rupture of an aneurysm into the œsophagus. But cases of survival after such hæmatemesis for days, weeks, and even for two months after more than a litre of blood has been lost, have been recorded. [See "Non-fatal Rupture of Aortic Aneurysm," "Review," 1904, p. 703, and "Recurrent Copious Hæmoptysis" from an Aortic Aneurysm," "Review," 1905, p. 367.] Rupture of an aortic aneurysm into the œsophagus is even compatible with a return to activity of the patient. The arrest of the hemorrhage has been explained as due to plugging of the opening with clot. Dysphagia is rare in aortic aneurysm. In this case there was no mechanical obstacle to deglutition. The selective character of the vomiting for liquids points to the absence of such obstruction and to spasm of the œsophagus as the cause. Evidently both the salivation and the vomiting were due to irritation of the exposed pneumogastric nerve during deglutition.

Rupture of an aortic aneurysm into the digestive tract is rare. In a period of seventy-two years 142 cases of ruptured aneurysm were reported to the Societe Anatomique of Paris. In

79 rupture occurred into the air passages and in only 6 into the digestive tract, once into the duodenum, once into the stomach, and four times into the œsophagus.—*Medical Review.*

Prolonged Lochia.

Whenever the vaginal discharge continues into the third week after delivery, either there is retained debris with subinvolution or an unhealed laceration of the cervix. It is perhaps not best to make a perfect examination at this stage since intrauterine manipulation might result in serious pelvic infection. Rather it is better to use boric acid or carbolic injections followed by antiseptic suppositories and internally 5 grn. of quinine thrice daily—a drug which contracts the uterine fibres and thus promotes involution. If bloody discharge continues into the fourth week the uterus must be carefully scraped out and perhaps touches with iodine and carbolic. Internally ergotin, quinine, and strychnine are now indicated, and in two weeks more the uterus will generally be found of normal size unless serious infection has occurred at time of labor.—*Amer. Jour. Clin Med.*

Koplik's Spots.

Burg has recently called attention to the positive value of Koplik's spots in the diagnosis of measles. These spots, which appear on the mucous membrane of the inside of the cheeks, have a rose-colored periphery with a bluish-white centre. He has not found them in any patient except one who was developing measles. Their diagnostic value lies mainly in their early appearance, nearly two-thirds of their appearances being on the second or third day preceding the eruption of the disease. Some few cases show the spots the day before the eruption appears, and they are very rarely observed to develop coincidentally with the eruption. Their absence, however, does not exclude measles, as they may not appear during the entire course of the disease.

The diagnostic importance of these spots should always be remembered in instances of delayed eruption, especially when such cases occur during the occurrence of scarlatina.—*The Clinical Review.*

Telephone Advice.

The use of the telephone by patients who wish to secure medical advice for which they do not expect to pay is the source of considerable annoyance to most practitioners. In order to put an end to all doubts as to the lawfulness of charging for tele-

phone consultations a Viennese physician recently brought a case into court, in which a patient who had on several occasions, even in the night-time, asked for professional advice and had refused to pay a fee for the service. The judge decided that advice must be paid for whether given in the consulting-room, by a letter or telephone, or at the bedside. It is the duty of a practitioner to decide whether the case is such that he may safely give instructions by telephone after he has seen the patient on a previous occasion. If physicians would render bills for telephone consultations at the same rate they charge for office consultations they would soon cease to be annoyed in this manner.—*Medical Age.*

Routine Urine Examinations.

M. H. Fussell, Philadelphia (*Journal A. M. A.*, July 28), insists on the value of the routine examination of the urine. Even though albumin and casts do not always mean nephritis, their presence in the urine indicates that a vital organ is at fault, and that this fault must be duly considered in the diagnosis, prognosis and treatment. There are other conditions also to be made note of, which are of the greatest importance, such as the presence of glucose, of pus, of blood and persistent or intermittent excessive amount, all of which are to be taken note of in the routine examination. He gives, as illustrating his view, his own experience for the past eighteen months, in which he has examined the urine of 763 patients, and found abnormalities in 15 per cent. He gives abstracts of the case histories of a few of these which proves, he thinks, that it is only by a routine examination that we can make more than a tentative diagnosis only when symptoms point to a genitourinary disease is to miss the diagnosis in many important cases in time to be able to give them benefit by treatment.

Earache. A. Bardes (*Medical Record*, January, 20, 1906).

The writer advises that as soon as earache begins the patient should be kept quiet, put to bed, and placed on a fluid diet, and in other ways treated as one would treat a patient with a high fever. The bowels should be kept open, and a single dose of morphine may be given to insure rest and comfort. Dry heat or else an ice-bag can be applied to the ear. The former is the more acceptable to most patients. Every three the ear should be gently irrigated with a hot solution of bichloride 1 to 5,000, after which a few drops of a 12 per cent. solution of carbo-glycerine may be instilled. Under no

consideration should a person be allowed to suffer pain longer than twenty-four hours. If the pain continues and the drumhead is inflamed and distended, palliative measures are worse than useless, and any attempt to abort the inflammation by means other than surgical is dangerous, and valuable time is lost in so doing. A bulging drumhead should be treated in the same way as a septic formation in any other place. It should be freely incised, rather than simply punctured or allowed to break.—*Monthly Cyclopedia of Practical Medicine. cine.*

Perinephritic Abscess. RAMON GUITERAS (*New York Medical Journal*, January 27, 1906).

The author believes that many more cases of perinephritic abscess are due to suppurative renal disease than is generally supposed, a fact which will be proved with the rapid strides that are now being made in renal surgery. Traumatism, exposure, and similar influences to which primary perinephritis is attributed, are not so important as many observers have claimed. They are often vaguely given as causes, when they are simply coincidences, or the active causes of rupture of already existing abscesses in the kidney or neighboring structures.

It is important, though difficult, to determine the source and course of the pus. Therefore, before the operation, pus should be looked for in the common urine and the separate urine by the ureteral catheter. During the operation the surgeon should try to determine whether the kidney is the source, and if not, what tissue or organ is. It is equally as important to discover the road taken by the pus, as it indicates where a counter-opening should be made, and the further treatment of the case for complications.

The elements of success in operations for perinephritic abscess may be summed up as follows: Early incision and evacuation before the pus has had time to burrow extensively. Thorough exploration, without timidity, opening the kidney and exploring the ureter if need be. Thorough drainage down to the deepest part of the sac by means of large, soft rubber drains or gauze, the drain being kept in place until a well-formed sinus exists down to the deepest part of the cavity. Nephrotomy, nephrostomy, or nephrectomy should be performed if indicated at the time of the operation or later.—*Monthly Cyclopedia of Practical Medicine.*

British Medical Association.

It would be unpardonable not to take special notice here of the above mentioned *Handbook and Souvenir of Canada.*. This handsome and artistic volume, in very truth an *edition de luxe*, by "Polymetis," is at once a history, a guide book, an illustrated album, and a bibliography of the sturdy and vigorous Dominion. It treats of the physical conditions of the various sections of this great Dominion of 3,575,000 square miles, an area "somewhat larger than the United States (including Alaska, but not Hawaii and the Philippines), and not quite as large as Europe;" of Nova Scotia, the "Land of Evangeline," an "inspiration to poets;" of Newfoundland; the St. Lawrence; the "Habitants"; quaint Quebec and lively Montreal; of Kingston and Toronto; of the political conditions, banking and business methods, the religions, the arts and institutions of learning, the hospitals, the social conditions, immigration, police and military systems, and of the more remote (in space) and recent (in time) territories, as far as the Yukon. Besides numerous half-tone illustrations the book is embellished also with thumb-nail sketches in monochrome on nearly every page. It will, I am sure, be treasured permanently by all persons of taste who received it.—*St. Louis Medical Review.*

SURGICAL HINTS.

In the early stage of acute gonorrheal endometritis it is important to abstain from applications to the uterine mucosa and to restrict treatment to simple measures of cleanliness, as vaginal douches and sitz-baths.

Men of healthy and vigorous appearance have not rarely been found to suffer from azoospermia, so that examination of the spermatic fluid of the husband in cases of sterility in the wife will often save the latter from much useless treatment and discomfort.

After operations for hemorrhoids bleeding sometimes recurs after a time. This is not always attributable to the incomplete removal of the piles or to the formation of others. It may be due to hemorrhoids which are seated high up above the sphincter and which often can only be discovered by rectoscopic examination.

Every case of retropharyngeal abscess demands prompt incision, as an attack of asphyxia may arise at any time and terminate fatally before the physician can be summoned, or should the abscess burst spontaneously, the contents may be drawn into the air passages and cause death immediately or from secondary pneumonia.—*International Journal of Surgery.*

Miscellaneous

Science and Medicine for Autumnal Coughs and Colds.

Have your patient bathe the feet in hot water before retiring and drink a pint of hot lemonade. Two Antikamnia and Codeine Tablets taken with the lemonade will quiet the nerves, produce sleep and help break up the cold.

Patients should be advised, when tempted to cough, to take a deep breath, filling every air cell, holding it until the warming, soothing effect comes, or so long as is reasonable, and mark the mollifying result on the cough, which, even when the cough seems unavoidable, will often be found under control. It will help to minimize the cough and in the milder cases will stop it altogether after a little perseverance. The explanation of this is that there is a liberation of nitrogen in the air cells, which has a quieting effect on the irritated mucous membrane.

If the cough is persistent or deep-seated, and especially if it is annoying at night, one Antikamnia and Codeine Tablet slowly dissolved in the mouth will quiet the nervous tickling and stop the cough.

The second annual meeting of the International Medical Association of Mexico will be held in the City of Mexico November 14, 15, 16 and 17. The papers and discussions will be in English, and a cordial invitation is extended to the members of the professon in the United States and Canada. Dr. R. D. Robinson is president, and Dr. W. R. Jamieson, secretary, both of Torreon.

Dr. J. R. Goffe recalls that at a meeting of the Obstetrical Society of New York, in 1882, Dr. Emmet, who had just returned from a visit to Europe, presented a number of Fallopian tubes which had been given him by Lawson Tait, and stated that while he believed that pelvic cellulitis was largely tubal trouble, and that Tait was curing it, he, himself, would never open the abdomen of a woman and remove a Fallopian tube. Thomas, who was present, evidently had no such scruples, for within three months he presented before the society a report of three cases in which he removed the tubes.

He also recalls that Fordyce Barker was a believer in the theory that puerperal infection was due to some mysterious influence floating about in the atmosphere. Thomas and Barker got into an active controversy on this subject over a paper in which Thomas had advocated rather extreme ideas regarding disinfection of the room in preparation for an aseptic accouchement, in support of the views of Oliver Wendell Holmes and Semmelweiss regarding the personal infecting possibilities of

the accoucheur. Barker, who was the great obstetrician of the time, had been the attendant at a number of accouchements occurring in prominent families, and in which infection followed, peurperal fever being epidemic at the time. He ridiculed the ideas advocated by Thomas, who subsequently came out with a paper on the subject which completely routed his popular and talented antagonist.—*The Clinical Review.*

That doctors are at present passing through bad times is undoubtedly true, for it has been estimated that during the last three years their incomes have fallen off 25 per cent., although there has been some improvement since 1904, which all look back upon as the lean year. The causes of this depression can hardly be those alleged by the correspondents whose letters we have quoted, for they were in operation long before the period mentioned; we must, therefore, look for more recent conditions to supply the answer. We believe the chief causes to have been, first, the gradual dying down of the epidemic of influenza which in 1900 caused a mortality of over 16,000, but in 1904 killed only 5,694; and, together with this subsidence of epidemic sickness, we have had mild winters, accompanied by a decrease of the type of illness which we may call "seasonable." The second cause is the depression of trade resulting partly from the frightful cost of the war, which was felt most acutely after the extraordinary war expenditure had ceased and trade had returned to its normal channels, and partly the normal reflux after the high-water-mark that trade had reached just before the war.—*British Medical Journal.*

The Struggle for Existence.

There was a pathetic advertisement in the *Times* the other day, and we are glad to see that it is already receiving quotation in various journals. It ran:

AN EAST-END (London) MEDICAL MAN, B.A., Cantab., who has never had a day's holiday or a Sunday's rest since he has been in practice, and who has not sufficient capital to purchase a more comfortable living, would like to change his profession. He has taken honors in Science, so judges himself capable of filling a Post as ANALYTICAL CHEMIST. Having good credentials and references, he hopes that manufacturing firms, &c., will give his advertisement their consideration.

Those who are in a position to judge know only too well that the East End (London) medical man is typical of a large class. A man may be well educated at a university, he may be competent in his profession, he may be diligent and industrious,

The Canadian Practitioner and Review.

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Original Communications.

THE OPSONIC THEORY.*

SIR ALMROTH EDWARD WRIGHT, M.D., F.R.S.

DEAN REEVE: Mr. Chancellor, President, Ladies and Gentlemen: By the courtesy of the President, who generally takes the chair on these occasions, I have the honor of introducing the lecturer of the evening. We have had the privilege of listening to distinguished strangers on occasions similar to this, year after year, not always from abroad, but we have generally—in fact I may say always—secured one who would both interest and instruct you, or those who happen to be present. As a rule our guests or visitors have been from England or Scotland. To-night we have the pleasure of listening to one who is a graduate of the famous old Trinity College, Dublin. (Applause.) How it has been accomplished I need not say, but as a matter of fact for one or two hundred years at least there has been a bright succession of men of genius and of eminence in Great Britain who have well sustained the balance against the brilliant and accomplished French savants and the erudite and profound Germans, and in this regard the Emerald Isle has played well her part. (Applause.) In regard to medicine proper I need only recall the names of Cullen and Stokes and Graves and Churchill and Collis and Tuffnill and others. You all know them, in fact their names are household words, Pasteur on one side of the Channel and Lister on the other, and it would seem that of late the mantle of one at least who has gone to his reward has fallen upon the

* Opening lecture of the Medical Faculty, University of Toronto, for Season of October 3, 1906.

shoulders of a few men mainly residing in Great Britain or Ireland. I need only mention one, Donald Ross, and the guest of this evening, Sir A. E. Wright (applause), and without any further preface I will call on Sir A. E. Wright to give his address.

Sir Almroth E. Wright (rising amid applause): Mr. Chancellor, Mr. Dean and Gentlemen, as you may have noticed, the Dean did not announce the subject matter of my address. That was what we call in the laboratory "a touch of nature"—I mean it was done by design. When I was asked to give this inaugural address I was overcome with the feeling of responsibility in addressing so many people, for I have not addressed more than a half or a third of this number at one time, and of course responsibility increases with the number of auditors. Again, when I came to consider the subject matter of my lecture I thought of addressing you on the "Physiology of Belief." When I suggested that subject to some of my fellow passengers on the steamer they said, "Anything else but that"; but I still want to leave it in doubt whether I am going to address you on the "Physiology of Belief" or as an alternative on some of the work I have been doing with my pupils on inoculation. I hold that the physiology of belief would be far more interesting and far more important. It would be a disquisition on the changes that occur in the body when you accept anything as true, and the evidence on which you accept things as true. The most important faculty of the human mind is not to remember things told, nor is it even to comprehend and pick up things given, but it is judging between truth and falsehood, and if I could in an hour's time tell you the test whereby you could determine whether the things you believe are true or not, I think I should have done more service than if I gave you one shred of knowledge that we have collected in our work. But I know your feelings would be against that, therefore I am not going to address you on the physiology of belief and why we accept some things as true and others as not true, but I am going to put that aside and consider the alternative subject, which is the treatment of certain diseases by inoculation. The work I am going to bring before you indeed is not my work alone, for I have had a number of very zealous students with me. When I tell you we can get men to sit up till three o'clock in the morning, not one day alone, but day after day, in order to plot the curves which hang before you, and that every dot in those curves represents three or four hours' work as a rule, and that we have people who will take curves like that and sit up night after night, dividing the night into watches, in

order to see what happens with the protective substances in the blood in the course of a fever, you will understand that I speak with very great thought of all the men that have helped me to do this, and not the least among them is one that has come from among you, Dr. Ross (applause). As I have said I have had a number of earnest co-workers, and it is only by the combined effort of a number of people that you are able to ascertain the facts put before you in these numerous diagrams.

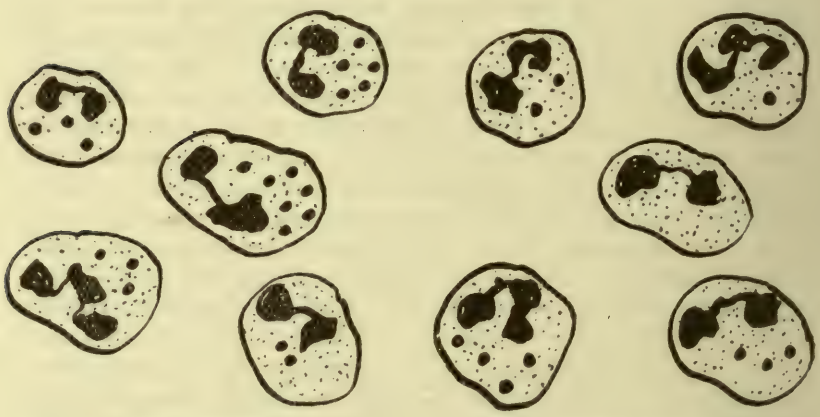
Let me tell you the subject matter about which I am going to discourse to you. Whatever opinions you may hold about medicine, there are some who believe that medicine is a very effectual thing, and mankind has discovered the secret of *curing* all kinds of diseases. As a matter of fact man has discovered the way to *tend* diseases. Disease is like a flood along the banks of which the medical man goes so that he may watch it, and prevent an excessive amount of damage. That is about my idea of medicine. You had better take it in this way: Man has a great control over disease, but there are some diseases over which he has very little control, and in these cases all he can do is to adopt the expectant treatment, that is, to sit by the patient's bedside and feel his pulse and take his temperature and let nature play her part. Nature does play her part very often and brings a number of people through. In typhoid fever she saves nine out of ten, and sometimes nineteen out of twenty. There are some cases where the records are very much worse than that. In the advanced cases of phthisis you say everybody is going to die; in the case of boils the medical art is able to do very little, and even in those trivial diseases such as pimples on the face, which make some people miserable from the age of 15 to the age of 30, medical art is notoriously unable to avail much. In such intractable cases what are you going to do? You can either wait till somebody gets a cure by definite inspiration—and if you look at the advertisements, even the advertisements in Toronto papers, you will see that there are a great many people who profess to cure all sorts of incurable diseases. You cannot believe in those "cures," because you know Nature does not give cures into the hands of people without work. Nature takes ample care that nothing is found out except through an infinity of work. In the case of those incurable diseases you have your choice, you can either go to the advertisements in the papers for cures, or you can say, "It is a task for me to sit down and study these conditions very carefully and see if a cure will not come out of the proper understanding of them." I have had problems of that description thrust upon me in the

different rôles I have had to occupy. For instance, I was connected with the Army as a civil professor and we used to see great numbers of people come back from India wrecks from typhoid, and the returns showed that about two per cent. of a battalion were attacked with typhoid every year, and that half of that number died. There was no remedy for that unless a remedy could be sought at the hands of Science. I sat down to work with my assistants and we studied the problem of resistance of the blood against typhoid fever, and we elaborated a system of inoculation which I think is doing useful work in the world. I am not going to discourse to you about preventive inoculation against typhoid—that lies rather remote from your life. The chances of getting typhoid even here in Toronto are not sufficiently great to induce people to undergo preventive inoculation against typhoid. But I began working on that matter, and when anti-typhoid inoculation had come to an end for a period, a man chanced to come to me who was covered with boils from head to foot. He had had blood poisoning some nine years before, and his beard was in a state of severe inflammation; he had styes in his eyes and his life was a misery through his staphylococcus infection—staphylococcus being a microbe that grows on and in the skin. Now this man had very little resistance against this particular microbe and therefore staphylococci grew freely in his tissues. Instead of an ointment I applied some of the knowledge we had acquired in connection with typhoid to the treament of this man and we were very successful in getting him entirely well.

This is only an aside to tell you how the work began. The point I want to impress is that you have to study the question of bacterial disease very carefully. Why do microbes invade the body? What does Nature do to ward off these microbes or to cure the invasion after it has begun? These are the problems I want to consider with you for a time. You have learned, or will learn in your classes that when you introduce a microbe, such as the staphylococcus, into the artificial nutrient media we employ in the laboratory, that it increases and millions of microbes are produced in a very few hours. It is obvious to consideration, if you sit down to think of it, that the blood cannot be such a medium as our artificial laboratory medium. When you introduce microbes into the blood they do not proliferate at random in that fashion. There are protective or bacteriotropic substances in the blood that prevent them growing and increasing in the body. You will suggest that the blood might not be a proper nutrient medium, but bacteriological investigations show that

the tubercle bacillus, the diphtheria bacillus, and the staphylococcus all grow extremely well in the blood; in fact that they grow by preference in the blood. Therefore the explanation cannot be that the blood does not contain nutrient media. Our bodies contain very succulent food indeed, and the microbes would be only too glad to live on us. When you consider how the blood differs from the nutrient medium used in the laboratory, you find two outstanding differences. To begin with, it contains white blood corpuscles, and these have the faculty under certain circumstances of picking up the microbes and ingesting them and killing them. Now the blood fluids are not simply an indifferent medium—as Metchnikoff the author of the theory of Phagocytosis thought. In other words the blood differs from the broth not only in the fact that it has white corpuscles, but that it also contains substances which act on the bacteria. They act upon them somewhat after the manner of antiseptics; the analogy is not very close, but it is something of that sort. In other words your blood represents a fluid somewhat comparable to weak carbolic acid in which are white corpuscles. These antiseptics in the blood may be partly responsible for keeping the blood free from bacilli, but are not wholly so. By a certain technique we found that it was possible to separate the white corpuscles from the blood fluids, to test them separately and see what white corpuscles could really do. So we took white blood corpuscles obtained from our own blood and an emulsion of bacteria, mixed them together in capillary tubes, kept them at blood heat for about half an hour and watched to see what occurred. We were astonished to find that under those circumstances the white corpuscles did not ingest the bacteria; and therefore it looked as if the while blood corpuscles were of no use at all. Then we mixed with the bacteria and the white blood corpuscles a portion of the fluid of the blood, and we found the fluid of the blood influenced the microbes in such a way as to prepare them for ingestion. If you will refer to this diagram (Fig. 1), you will see that almost all of the white blood corpuscles have picked up tubercle bacilli. We found then that when you mix bacteria and white blood corpuscles together the white blood corpuscles have no power of taking up the bacteria; but when, on the other hand, you add the fluid of the blood to the mixture of leucocytes and bacteria, the fluid of the blood alters the bacteria in such a way as to make them palatable for the white blood corpuscles. In other words the blood has prepared the bacteria for ingestion. For this phenomenon we had to find a name, and spending some time over Greek and

Latin dictionaries we found the word *opsono*. Opsono means, "I prepare for dinner"; it must be sharply distinguished from an almost identical word which means, "I advertise or proclaim with a trumpet." These substances that prepare for ingestion are what I wish to speak of as *opsonins*. It was a question at the same time whether the white blood corpuscles or the opsonin in the blood was the more important agent. In order to answer this question we took a patient who was very badly infected with the tubercle bacillus, and we contrasted the blood of this patient with what we call "pool." Now "pool" in our laboratory language means the pool of the blood of all the normal men in the laboratory. Everybody when he come into the laboratory bleeds himself; he sticks a needle into his finger and draws blood off



NORMAL BLOOD.
20 Staphylococci in 5 White Blood Corpuscles.
Opsonic Index - - - 1.0
(Schematic)

PATIENT'S BLOOD.
10 Staphylococci in 5 White Blood Corpuscles.
Opsonic Index - - - 5.0
(Schematic)

and contributes his few drops to those of his fellow workers. So pool is made and no man who is not normal may contribute to pool. When we catch a tubercular man contributing to pool he has such a bad time he never comes near us again. With our pool blood as control we contrasted the blood of this highly infected tubercular patient of whom I spoke, and we investigated the question as to whether the patient's white blood corpuscles or the opsonins in his blood were deficient. Without wearying you with the details of this experiment I will ask you to accept the results. We found that the white blood corpuscles of our patient were just as active in phagocytosis as were our own normal white corpuscles, but that the patient's

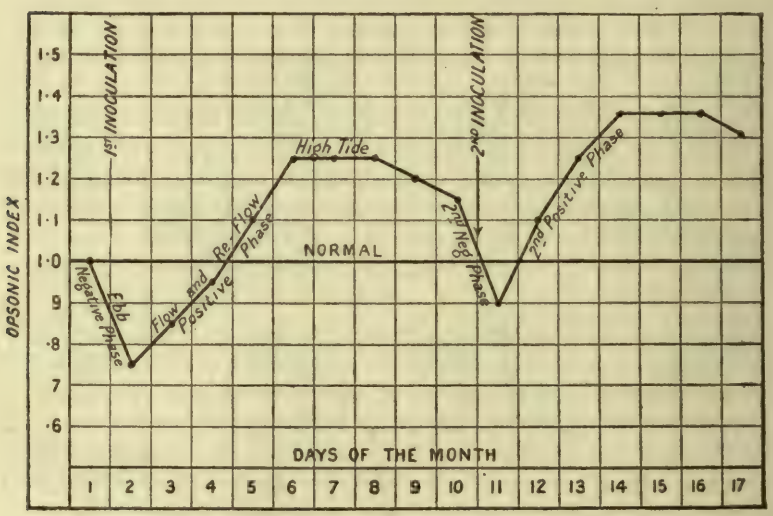
serum was only half as active as our own serum. Hence if we express the activity of normal serum for phagocytosis as 1.0, obviously we must express the abnormal activity of the patient's serum as 0.5. These figures represent respectively what we term the opsonic index of the normal person and of the diseased.

The first generalization I will ask you to remember, therefore, is that every patient, at any rate in the early stage, in the uncomplicated stage, who is infected by bacteria under ordinary circumstances has got diminished resistance, and that deficiency of resistance does not reside in his white blood corpuscles, but resides in the fluids of the blood. In other words, you can say that a patient with a low opsonic index is at least a candidate for infection by a particular microbe. One could go through a series of people and find out whether they had a normal power of resistance against the tubercle bacillus, or a diminished power of resistance, and in a world which is filled with tubercle bacilli you may be sure that a person with a diminished resistance becomes a patient; for we live in a world where no person reaches mature years without meeting the tubercle bacillus. Whether he is infected or not depends on his power of resistance. We find that a patient in the early stage has a low resisting power and we assume that if we had been able to get him before infection we would have found him in the same condition.

So far all this is only legitimate gratification of the intellect. We are able to explain to ourselves now why in a world where we all come in contact with infection, some people take tubercle and some do not take tubercle, why some get boils and some do not get boils. Some advertise in the street that they have a small resistance to the staphylococcus, because they have spots on the face. So one sees that resistance is the important thing. The next point is, What is the good of that unless you can alter it?; and when you throw back your thoughts to what has been done in connection with the prevention of infectious disease you will see that inoculation is resorted to. Commonly when we speak of inoculation we mean vaccination, and people that are subject, as we all are, to attack by the smallpox microbe take precautions through inoculation that they have a higher resisting power. Therefore the question suggested itself in connection with the patient I spoke of with the boils whether something could not be done in the way of inoculation to increase his resisting power to the particular microbe that affected him. In order to do that we must first study what happens when the microbe attacks the body. That meant that we must undertake an experimental inoculation with the particular microbe under consideration.

For obvious reasons we could not use living bacteria, but we could use bacteria which had been devitalized at a comparatively low temperature—so low that though life was rendered extinct the chemical constitution of their protoplasm was not greatly altered. So we took cultures of our bacteria and killed them at 60° centigrade, thus obtaining what we call a "bacterial vaccine."

Now, when we put a proper quantity of vaccine into the body what happens? (Vide Fig. 2). The beginning of the tracing represents the normal, healthy resistance. At that point, indicated by an arrow, an inoculation is performed. When we test the resistance afterwards we find it reduced. That is called



* Diagram of opsonic curve—varying as a result of inoculation.,

the "negative phase." The inoculation of a considerable quantity of vaccine thus reduces the resistance of the patient. Then after a time we find that the resisting power increases. That is spoken of as the "positive phase." Then after a time it falls away and eventually the blood of the patient does not differ very much from the normal. In other words, after inoculation there occurs first a diminished resisting power and afterwards an increased resisting power; that increased resisting power lasts for a period and then it falls away. Now, when the resisting power has fallen away the patient is not what he was originally. He has retained the faculty of rapidly manufacturing protective

* From paper by Dr. George W. Ross, *B.M.J.*, July 6th, 1906.

substances again, these opsonins, as soon as he is re-inoculated. We want to know what happens when we give a second inoculation. After the first there occurs the negative phase and then the positive phase; and on the declining wave of the latter we re-inoculate. The opsonic power goes down again and then rises higher than before and so on in this step-ladder fashion (vide Fig. 2). At one time we thought it was only a question of inoculating a man at definite periods to increase the resisting power to very many times the normal. That can be done in the case of typhoid, and occasionally though to a lesser degree in certain other infections, but I would have you consider this "positive summation" as the exception rather than the rule. One can, however, usually increase the effects of a primary inoculation by a secondary inoculation, though one cannot do so indefinitely. But there is another and a serious aspect of the question. Here is an inoculation (referring to a chart) after which the resisting power runs down; but after a time it rises and the patient is re-inoculated with a large dose; the resistance goes down further and before he can recover another dose is given and the resistance goes down still further. So anybody can inoculate with successive doses and reduce the resisting power to anything he likes. It is quite easy by this method to reduce the resisting power of the blood enormously. There is no doubt that when Koch brought out his method of inoculating with tuberculin he inoculated with too large a dose and produced a fever; as soon as the fever was over he gave another inoculation; as soon as the fever produced by that was over he gave another inoculation, and eventually many of the patients so treated got a general infection and died. This is the reason why you cannot inoculate at random without testing the blood every time. If you inoculate giving excessive doses, although you are not anxious to do it, although you are anxious to avoid it, you may be reducing the resisting power of the patient by each successive dose. Therefore we have these considerations to keep before our minds that after every inoculation the resisting power of the blood lessens and then it increases, and that when it is increased you may give another inoculation and keep it up. This is the only course we now take in connection with inoculation. We try to get only a small negative phase and a fairly big positive phase; when this is falling off we give another inoculation and so keep the patient on an average considerably above normal. Let me now summarize the principles of inoculation; after you have found that a patient is infected with a microbe you isolate the microbe in pure culture and then test the resistance of that

patient's blood to see whether or not it is able to kill off that microbe as well as normal blood can. If he is not able to do so, you inoculate with the proper vaccine, with vaccine made from staphylococcus if it is staphylococcus infection, from the tubercle bacillus if it is tubercle infection, and so on. Throughout the whole course of inoculation we endeavor to keep the resistance of the patient's blood as high as possible.

Let me now tell you of the results I got by inoculating two little girls who had been staying at a seaside resort along with a patient who had phthisis. They developed tubercular glands in their necks. They were brought to me and I tested their resistance to the tubercle bacillus and found that one had an opsonic power of 0.8 and the other 0.6 of the normal. I then undertook inoculation of these children with new tuberculin, carefully safeguarding each inoculation by an investigation of the blood. One got quite well, and the other was quite well for about a year; after that a small portion of an infected gland caseated and had to be discharged. Recovery then went on uninterruptedly.

I have led you to expect that you would find that patients affected with a bacterial disease were always lower in their resisting power than normal persons. As a matter of fact you would not have made many examinations of patients before you would find that that was not always so. Ordinary clinical observations should lead to a similar conclusion for if a patient's resistance is lower than the normal throughout the course of typhoid fever, what chance is there of his killing off his microbe? Obviously if a patient does not react to the typhoid bacillus the typhoid would always get the better of him, but we know that in the course of typhoid fever as in all bacterial fevers the body makes an effort to throw off the disease, in other words the body inoculates itself. As soon as the poisons get into the blood the body sets to work to produce protective substances and there occurs the phenomenon which we speak of as "auto-inoculation." You may get auto-inoculation progressing favorably as in about four out of five cases of typhoid fever. In fact the patient gets well of his typhoid because he inoculates himself from his bacterial focus and thus produces his own protective substances. In cases in which you have a strictly local infection, however, such as tubercular glands, such as acne, such as all those purely local diseases where you have not constitutional disturbances, the body takes no steps to protect itself and the disease runs on practically indefinitely. You may find the disease lasting through life, and then you will find the opsonic power low. This is because the bacterial focus is closely shut off from the lymph and blood streams and

consequently no auto-inoculation can take place. In many of those cases where the body is not inoculating itself you can inoculate for it and bring about a favorable result. Let me refer to a case of empyema which was treated by Dr. Ross at the Victoria Park Chest Hospital in London. The patient's acute symptoms were over, but the conditions seemed to be going on indefinitely. Investigation of pus from the sinus gave a pure culture of pneumococcus. On testing the patient's blood to the pneumococcus it was found to be normal on two occasions; but that makes no great difference, for if the normal resisting power of the patient is not enough to kill off the microbe, what are the indications? Obviously you should increase that power and get a higher power. An inoculation with a vaccine prepared from his own microbe was undertaken and immediately the opsonic index rose from 1.0 to 2.4. Two more inoculations were undertaken at appropriate intervals as shown by examinations of the patient's blood and in the short space of two weeks the discharge ceased, the sinus closed and the patient was discharged cured.

Here happens to be the chart of another case of Dr. Ross's (referring to chart). It refers to a boy who had tubercles on both irises. Inoculation with new tuberculin in proper doses and at appropriate intervals greatly increased the resistance of his blood and maintained a high degree of opsonic power for many months. Although the eye surgeons had seriously considered the advisability of removing an eye (so severe was the involvement of one iris), the patient has so improved under this treatment that his eyes might easily pass for normal and doubtless they will get completely well.

The next case we shall consider is one that has some interest because it shows us that when some cases get well of themselves it may be due to the fact that auto-inoculations have taken place. The patient was a child who had a tubercular knee. While lying in bed two observations were made, and the resisting power upon both occasions was normal. Then the patient's affected knee was massaged. When you massage a part what you do is, you knead it and you press out the fluid from that part into the blood or lymph system. If the tubercle bacillus happens to be growing in a knee, your massage is the equivalent of an inoculation from the fact that you are driving out into the circulation fluid infected with the bacillus. After our first massage there was a lowering of the opsonic power, but the patient came up to normal again. With another massage we got the same result; and to show that this auto-inoculation was the same as an inoculation put under the skin, an inoculation was undertaken with new

tuberculin when we obtained a series of events similar to that which had followed massage. Our next case is that of a patient with gonorrhocal arthritis affecting the knee. The patient was taken to the hospital, where the resisting power was found to be very low; he was inoculated with gonococcus vaccine, and the resisting power to the gonococcus went up very definitely. At that period the patient was put on massage. The knee joints only were massaged and immediately after we found that the resisting power of the blood went down and then rose again exactly as it does with an inoculation of a vaccine. Here again we did two more massages, and the same series of events occurred. In association with the great increase of opsonic power all the other joints cleared up; even the joints that were not massaged, the shoulder joints and clavicle joints got well. It would therefore appear that the tendency of bacterial disease to get well of itself, is due to the fact that in the course of the disease auto-inoculation is taking place constantly and that you get increased resisting power as a result of this. However, the auto-inoculation that takes place may be very ill-adjusted. Sometimes you get inoculation of much too large a dose and then you find a diminution of the resisting power instead of an increase. A friend and pupil of mine came up to work in the laboratory; he was the subject of phthisis. We found his resisting power was above the normal, 1.4. He spent a long and tiring day in the laboratory learning opsonic technique, and the next day he had to take to bed. We then found that the resisting power of his blood was down to 0.4. He took a fortnight to recover. Obviously the explanation of this unfortunate occurrence was, that man by working too hard caused changes in his circulation, drove out poisonous substances from his lungs into his blood stream and got the same effects as he would get by a larger inoculation of new tuberculin, in other words, a very formidable negative phase; the positive phase that came a fortnight later probably did not recompense him for his long period of lowered resistance This is the life of a patient with severe phthisis. He does work and tires himself, gives himself an auto-inoculation and gets ill, gets well a fortnight afterward; and so see-saws between a low and a high opsonic power. By such your tubercle patient is very little likely to get well, and we do not look with kindly eyes on auto-inoculation, because we feel it is often done in too large doses, and done indiscriminately. You cannot ask a patient to go and dance to bring on an auto-inoculation, because you do not know how big an inoculation he is going to give himself. What you have to do is to keep him for as long a period as pos-

sible as high as possible above normal. If the patient should get down much below normal the tubercle bacilli may take the opportunity to spread throughout his body and he may get general tuberculosis. The negative phase has to be closely watched, and you have to test the resisting power of the patient after each inoculation. You must give such a dose of your vaccine that will not reduce your patient's resisting power much (a dose that produces practically no clinical result), and yet large enough to give a good positive phase following a slight negative phase. I want to point out to you also that in the class of case which we speak of as septicemias, that is where the microbes have got into the blood stream, the patient frequently inoculates himself and gets through his fever, but notoriously there are cases in which he fails to do so. Hence certain types of general infection or septicemias are nearly always fatal. Such a type is malignant endocarditis where the microbes get into the blood stream and attack the valves of the heart. These cases nearly always come to a fatal end. We have a case of that sort, which we inoculated, and you may wonder at our courage in inoculating such a case. You would think to yourself that if you inoculated a patient who was already suffering from too much microbe you would certainly make him worse, but you have got to consider that the microbe is in the patient's blood. This situation is not the most favorable for the production of protective substances. When we do an artificial inoculation we put our vaccine into the subcutaneous tissues. There is very little doubt that this is a great deal more effective in making protective substances, than if we inoculated directly into the blood stream; furthermore, you do not get poisoning effects if you inoculate the patient into the subcutaneous tissues. Knowing those facts we favored inoculation in this case of malignant endocarditis where the streptococcus was in the blood itself and was attacking the valves of the heart. I saw the girl; she was about 18 or 19 years old. Her illness had begun with a severe sore throat; then a large tumor came in the side of her neck and it was supposed to be an inflamed gland. It disappeared of itself; but the microbes got into the blood stream and then she developed a high temperature which had been continuing for six or seven weeks before we came on the scene. Before this, however, the patient had been treated in various ways; first she had had many kinds of drugs. Drugs I take it are ineffectual in killing microbes in most cases. Then she had anti-streptococcus serum in large quantities. I take it that the anti-streptococcus serum is not a good method of treatment; but it would take me much too long to enter into

that question here. In this particular case it certainly had no effect. For weeks she had daily inoculations of serum and yet her temperature went on as high as ever. At the end of about six weeks we came in and made cultures from the blood and found the streptococcus; that is the first stage in the treatment, namely, to know what microbe you have to deal with. Then we tested the resisting power of her blood to this streptococcus and her resisting power or her opsonic index came out as 0.4; that is to say, that although she had microbes in her blood she was not successfully auto-inoculating herself. We then prepared a vaccine from the streptococcus obtained from her blood and inoculated her with a small dose. Immediately her blood power rose well above normal and the temperature began to come down. Successive inoculations were undertaken over a period of several weeks as indicated by investigation of the opsonic power of her blood, and the result was most gratifying. With the rise of opsonic power came the fall of temperature and amelioration of the patient's symptoms. The final result was that the patient made an absolutely uninterrupted recovery and she is to-day in robust health. (Applause.) That case made a great impression on us because inoculation seemed such a desperate thing to do. In the historical order we had already done something similar in certain cases of Malta fever, which, as you know, is caused by a microbe. You see nothing of it on this side of the water, but the microbe is very commonly distributed through the world; and in India and China and at all the Mediterranean stations there is a great number of patients. Five per cent. of the Malta garrison take Malta Fever every year. Nine of us altogether in the laboratory got Malta fever from working with the microbe, therefore we have a very healthy respect for Malta fever. Not that it is dangerous; only one of us died and that was the laboratory man. (Laughter.) The mortality of Malta fever is about two per cent., not a formidable fever in its immediate results, but very formidable from the fact that it sometimes runs on for two years. The average period in hospitals of soldiers is ninety days, but it frequently goes on for a year, and it frequently leaves people with crippled joints. It is a fever that is in fact not very toxic, but nevertheless lasts a very long time. We ascertained that in many of these cases nature made protective substances extremely slowly, and that the fever lasted a very long time. In the case of myself the protective substances could be determined in my blood when it was diluted six thousand times, and I got over my attack very easily. In other patients I have observed the protective substances so small in

quantity that they could hardly be measured. In such cases, while there is little danger of the patient dying, there is great danger of the fever continuing a long time. We have inoculated eight or nine cases now, and in every case we have found that the resisting power of the blood was increased as a result of inoculation, and that the temperature soon came down. If any of you get Malta fever, come over and be inoculated. (Applause.) Where we do not know what to do with a disease, where the microbes insist on living in the body, where, for instance, after a surgical operation the wounds fail to heal, because the microbes continue to multiply themselves, there is still a way out. You can find out the microbe, test the patient's resisting power to this particular microbe, and set to work by appropriate inoculations to increase the resisting power of the patient. I think that you will almost always see enormous clinical improvement. That is one reason why I would like to have discussed with you the physiology of belief; for when I make these statements I don't know whether they come home to you or indeed whether they ought or ought not to come home to you. You should take what I have told you to-night with very great incredulity; you ought to be very critical; you should not say that what I have told you is true; every man should test these things for himself. That opens the question as to what ought to be done if work is to continue along these lines here in our midst. Obviously only the fringe of the subject has been touched so far; it requires a great deal of effort to find out all that can be found out about therapeutic inoculation. There are very many diseases yet to be tried. In each case you can see that if you can find the microbe, you can test the patient's resistance, make inoculations and strive for favorable results. Where you have to deal with any bacterial disease I would like your thoughts to go immediately to the question as to whether or not this can be treated by inoculation. I look to the future and expect that the medical profession will be divided somewhat differently. There will be, of course, the general practitioner who will know that arsenic is useful in some cases, that the syphilis microbe is killed by mercury, and so forth. Then it might be possible for all medical students to learn the physiology of immunization; I hope that that will come to be taught. It is not ready to be taught yet, because it is being developed, but it ought to come into the physiology of the future. In the physiology that is to be of every day practical value what is the most important thing? Not how to digest your meals, but what steps does Nature take to get rid of the microbes that are playing havoc within you; and what

happens after microbes are introduced into the body. That physiology of immunization should come to be taught as a matter of course in every medical college. As a natural outcome of such development in medical science a new type of practitioner would appear, namely, the immunizator. He would say, You are infected with a particular microbe and my business is to find out the microbe, make a vaccine from it and inoculate you and bring up the resisting power of your blood. For such skilled service you will require a man who has spent years of study to master the technique; to know how to make the vaccines, to know where to look for the microbes, to know which are the most important microbes, to know how to isolate them, and most of all, a man with sufficient experience and ability to apply all this things.

At present we have no short cuts (with one or two exceptions) that make it possible to treat bacterial disease by inoculation without following closely the changes that take place in the blood of the patient from time to time as a result of inoculation. Whether these short cuts will emerge after much further study of this subject is a matter upon which it is impossible to express an opinion. Gentlemen, that is all I have to say to you to-night. (Applause.)

Editor's Note:—This lecture is published by special permission of Sir Almroth Wright. The stenographer's copy has been revised by Dr. George W. Ross who has been associated with the lecturer's laboratory for the past two years.

A STATISTICAL REPORT OF THE RESULTS OF OPERATIONS IN SARCOMA OF THE NOSE BY METHODS GENERALLY ADOPTED, WITH A PLEA FOR THE MORE EXTENDED USE OF THE ELECTRO-CAUTERY IN SUITABLE CASES.*

By J. PRICE-BROWN, M.D., Toronto.

Writers differ widely from each other in their general views in regard to this disease, and in introducing the subject a brief resume of prevailing opinions may not be out of place.

Lennox Browne in his voluminous work upon diseases of the "Nose and Throat," does not even mention the existence of sarcoma of the nose.

Shurly says that myxosarcoma is the variety that occurs most frequently within the nose; and that the usual seat of growth is either the middle turbinal region or the external wall, thus granting the primary origin of the disease within the nasal cavity. He also says that while the original growth may be pedunculated, the pedicle is soon lost, the base rapidly becoming broader, until it finally loses itself in the mass of involved tissue.

Kyle, on the other hand, says that "primary sarcoma of the nose is not of frequent occurrence, but as a rule has its origin in adjacent structures, and spreads thence into the nasal cavity." He insists upon early and complete eradication as the best line of treatment, to be accomplished by the use of the curette and galvano-cautery.

Bosworth in his report of 41 cases treats of it as a primary affection occurring in a single tumor, that may arise on the outer or inner wall of either nasal cavity. He further states that there is no clinical evidence in support of Weber's idea, that sarcoma is usually accompanied by several deposits of the same neoplasm in neighboring regions; and also, that the growth is soft and flabby, and that the tumor is invariably pedunculated.

Coakley says that sarcomatous degeneration is occasionally met with in cases of nasal polypi and other benign tumors, after these have been removed a number of times, a view which is accepted by many surgeons; and also, that the appearance of sarcoma within the nose may be the first evidence of the presence of sarcoma within the antrum. He says that the growth

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has a hard feel, as of solid tissue, and is not usually very movable even when of considerable size.

Harris in a paper published several years ago refers to a series of 103 cases, reported up to that date, including his own; and from the investigation of which he draws the following conclusions: That round-celled and spindle-celled sarcomata are about equally frequent in their occurrence; that the cartilaginous septum is the part most frequently involved, and next to this the middle turbinal body; that it usually proceeds from a well defined pedicle; that the growth is soft to touch and bleeds easily; and that sarcoma is a small tumor, usually pedunculated and rarely multiple. In speaking of treatment he says that while many cases require removal by external radical operation, there are others in which an intranasal operation is alone justifiable; but that no matter how treated, more than half the cases are ultimately fatal.

Halsted believes that the period of life most susceptible to this disease is between the fortieth and the fiftieth years. His graphic description of the symptoms is worth repeating: "The conspicuous absence of pain while the disease is confined to the soft tissues; the presence of epistaxis as a prominent symptom; the nasal obstruction so great that both breathing and eating become distressing to the patient; while speech becomes difficult and the senses of smell and taste are either lost or severely impaired; until finally, as the disease advances into the accessory sinuses or the cranial cavity, pain becomes severe and continuous; and death either from sepsis or exhaustion is the result."

In order to bring the results of investigation down to the most recent date in the preparation of this paper, I sent one hundred circulars to leading laryngologists in the United States and Canada, and as a result I have received about fifty replies. Although not by any means as satisfactory as one would like, yet they contain much valuable information, and I extend to the gentlemen, who forwarded the answers, my most cordial thanks. A synopsis of these reports I here give:

Frudenthal writes me that he must have had under observation, in hospital and private practice "surely twenty cases or more." Unfortunately he has no distinct records of them. But the percentage of permanent recoveries after intra-nasal operative treatment he reports as "none," and after external operations likewise as "none."

Otto Stein says that he must have seen between twelve and twenty cases of nasal sarcoma, which were treated by "various methods" with "varying results."

Thompson reports twelve cases, nine of which were inoperable. Hence these nine, with Stein's twelve to twenty, and Frudenthal's twenty, are not tabulated in my present report.

Now and then, though rarely, a detailed report of a single case has been forwarded, which in itself is intensely interesting, giving at a glance, a vivid picture of the whole scene. For instance, Freeman reports one that he referred to Keen for external operation. I quote his own words: "The sarcoma evidently began in the naso-antral wall and extended into the frontal sinus, antrum, ethmoid and sphenoid, by finger-like projections, but it did not seem to infiltrate the lining of these cavities, as it was easily shelled out, leaving them, with the exception of the orbital plate and the naso-antral wall, practically uninjured. The incision was so extensive that the interior of all the accessory cavities on the affected side could be plainly examined. The septum was not involved, and after the operation, the eye was kept from falling into the antrum by packing. Although the operation was done eight or ten years ago, there has been no return."

Norval Pierce mentions six cases. All were treated by intra-nasal methods, although of what nature is not mentioned. All recurred but one, in which there was complete removal at a very early date. In this case the recovery was permanent. In two of the cases external operations were subsequently done with only temporary benefit.

Chevalier Jackson reports eight cases. All were operated on by the external method. Two of these disappeared afterwards, so that no trace could be made of them. But the other six all died of recurrence of the disease at varying intervals after operation.

To be definite, the following is a summary of all cases reported as operated upon, whether internally or externally, in which the patients were kept under observation until final results were obtained.

No. of Cases.	R. Nas. C. affected	L. Nas. C. do.	Both C's do.	Sept. do.	Ant. do.	Int-Nas-Oper.	Recurrence.	Extra-Nasal Oper.	Recurrence.	Dead
51,	32,	29,	9,	11,	27,	19,	13,	33,	25,	37

In several of the above, operations were done both intra-nasally and extra-nasally.

Permanent recoveries after intra-nasal operations, six out of nineteen, or 31%.

Permanent recoveries after extra-nasal operations, eight out of thirty-three, or 24%.

Total permanent recoveries after operations of whatever kind, fourteen out of fifty-one, or 27%.

We must add to these the inoperable cases and those refusing operations, which presumably would all be fatal.

In one point the concensus of opinion among authors appears to be unanimous; and that is in the absence of pain when the soft tissues are alone affected.

Before speaking of my personal experience in the treatment of this disease, I may say that I have drawn a wide distinction in my meaning between intra-nasal operations and extra-nasal operations; all classes of intra-nasal operations being included in the one, the work being done through the anterior naris only and without injury to it; and in the other, all classes of external operative work done by surgical incisions through the true skin, and by this means aiming at the removal of the sarcomatous growth.

Personally I have had four cases under treatment. Only one of them suffered from pain within the nasal cavity. The main signs and symptoms in all four were intra-nasal. All were males, their ages being eighteen, twenty, fifty and fifty-eight years. All were subject to severe epistaxis upon very slight provocation. With one exception there was complete blockade of the affected nasal passage. By the process of exclusion, as well as by the signs and symptoms, the disease in three of the cases was pronounced to be sarcoma by competent medical authorities before the cases were referred to me for treatment; and in each of these, two or more distinct microscopical examinations verified that the diagnosis of sarcoma was correct. In the remaining case, histological examinations were made at my request and the case was pronounced a spindle-celled sarcoma. In this patient the growth was the smallest.

Although the results in my cases have been unusually favorable, I do not give any credit to the skill of the operator but to the method of operating, and I emphasize the latter, because the work has been principally done by the use of that much-abused instrument, the electro-cautery knife.

The first three cases were reported in the August number of the Journal of Laryngology in 1903. At that time eight years had elapsed since the final operation upon the first case. The case was well then, and is well now, with no recurrence whatever of the disease.

In the second case, and this was of the spindle-celled variety, already referred to, occurring in a man aged fifty, the growth had been removed about a year when the case was reported.

At the present time, three years later, he is still a healthy man following his daily occupation as fireman, and free from any re-development of sarcoma.

The third case was the most extensive purely intra-nasal sarcoma that I ever saw, filling the left nasal cavity, bulging the anterior naris, flattening the nose and cheek, more than half filling the naso-pharyngeal space, and holding the soft palate immovably in a horizontal position. This case was referred to me in October 1902, now four years ago; and was reported by me with the exhibition of pathological specimens and micro-photographs at the meeting of the American Laryngological Association at Washington the following year. As, however, it was considered rather premature to report so recent a case, I again read a paper upon it, reporting progress, at the annual meeting of the same Association at Atlantic City in 1905. I still further exhibited, the patient himself this time, at the Laryngological Section of the British Medical Association in Toronto in August, 1906. There have been slight recurrences at the junction of the posterior naris with the naso-pharyngeal vault up to February last; but they were always controlled by a touch of the cautery. The man is well nourished, presenting a rugged and healthy appearance. The nasal cavity is wide and free throughout its whole extent, exhibiting in some measure the great size which the growth had assumed before its removal. When required he keeps the passage free from accumulations by the use of an oleaguicus spray. His occupation is that of telegraph operator, in which he is regularly employed. He learned the art since the removal of the sarcoma four years ago.

These cases were all treated by intra-nasal electro-cautery operations, the parts being anesthetized by cocaine. The first one, operated upon eleven years ago, was treated before the advent of adrenalin, and was attended by some terrific hemorrhages. Still the work went on with the result already stated. In the second and the third, adrenalin was used freely and with marked advantage. In the third, however, the hemorrhages were often exceedingly severe, possibly in some instances due to a desire to remove too much at one sitting. These three men are all well, busily following their occupations in Toronto, to-day.

In all these cases I believed that the growth was mainly if not entirely confined to the nasal cavity. The method of operating, particularly in the third case, was as follows:

After producing local anaesthesia and anemia by the free use of cocaine and adrenalin, a large tubular speculum was introduced into the nasal passage as deeply as possible; and then

perpendicular incisions with the electro-cautery knife at a high degree of temperature, were made into the basal attachment of the growth on the turbinal side. They were made as deeply as possible without producing alarming hemorrhage. The moment this threatened to be severe, the operation ceased, and temporary tampons would be inserted to control the bleeding; but almost invariably, they would be removed before the patient left the office.

On his return, one or two days later, the cauterized tissue would be removed either by snare or forceps, and the parts cleansed by sprays. Then anaesthesia and anemia would again be induced and the operation repeated. Thus, successively, piece by piece, and day by day, with the electro-cautery blade at almost a white heat, would the sarcomatous tissue be dissected away, working gradually from before backwards, until the posterior naris was reached; and the patient to his delight would be able to blow his nose through a free passage again—something he had not done before for months, perhaps for years.

Case 4.—This, my most recent case, was referred by Drs. Carleton and Langstaff.

On August 2, 1906, the patient, a retired butcher, aged fifty-eight years, was first seen by me. A pathological section had already been excised and microscopically examined, and the case was pronounced one of malignant disease.

I found on examination that the left nasal cavity was filled completely from the anterior to the posterior naris with a dark red growth, dense in character, but which bled readily on being touched. I removed a section, and microscopical examination proved it to be a round-celled sarcoma.

Family history. His father had died at the age of seventy-two years, presumably of some cerebral trouble, but on post-mortem examination, his family physician had found a hard cancer of the stomach.

Personal history. A number of years ago, small growths, presumably polypi, had been removed from time to time from the nose; and latterly, while otherwise healthy, he had been troubled with a good deal of yellow discharge from the left nostril. This was supposed to arise from left antral disease. During the present year the left nostril had gradually closed up by the formation of the new growth; and as the cavity filled the discharge lessened. For six weeks there had been practically no discharge, but an external swelling had formed over the left nasal bone in the region of the lachrynal sac. This had been opened with

a lance, giving exit to a free discharge of pus, particularly on pressure. Accumulation recurring, relief was given from time to time until I saw him—the conclusion being that the external discharge of pus was really a vicarious outlet from the closed antral cavity.

There was no particular enlargement, but there was oppressive head-ache and some soreness of the nasal region. The temperature varied from 99° to 101°. Mouth breathing was compulsory, and there was a severe odor of antral disease. He had lost twenty-five pounds in weight during the last four months. The corresponding cheek was not swollen but there was eversion of the lower eyelid, which the patient affirmed had existed for years, and was due, he said, to severe exposure during a winter storm.

After careful examination, I arrived at the conclusion that the attachment was probably to the outer wall, and that while the middle and the inferior turbinals were involved, the vault and septum might be free; and that if the antrum was affected, it would be near the middle of the naso-antral wall.

I believed also from my past experience, notwithstanding the age of the patient, that I would be justified in operating upon similar lines. To this the patient gladly assented; although at the same time, I told him of the risks of operation, and the possibilities of non-success and recurrence of the growth.

For each operation upon the growth the patient came a mile and a half on the street cars, then walked into my office, then walked out again, and returned in the same way.

August 7th. After applying cocaine 8%, and adrenalin 1 in 1,000, the first operation was done as already described, the cuts being made with the electro-cautery knife at a bright red heat. The tissue was dense and hard to penetrate, but the bleeding was slight, care being taken not to cut in too deeply on this tentative occasion. Pain also was slight. Faintness there was none. No tampons were inserted.

August 8th. Returned to office, sloughs removed. Operation repeated.

August 9th. Exactly similar treatment with operation.

August 10th. Also similar to the previous occasion with operation.

By these four operations, the tumor which had filled the left nasal cavity almost to the tip of the nose, had been dissected back for more than an inch, leaving the vault, septum and floor clean. On the outer wall, the front parts of the middle and inferior turbinals, which had been softened in character by the

development of the disease, had been dissected away, without any appearance of recrudescence.

As I was leaving the city for a few days, the man returned to his own home, sixteen miles away, during my absence.

August 20th. Under exactly similar conditions to those already mentioned, he again came for treatment; and electro-cautery operations were done under cocaine and adrenalin anaesthesia as before, on August 20, 21, 22, and 23. The sloughs were taken away on the day following each operation before renewing the burning. By this time the greater part of the middle and inferior turbinals had been removed and the patient could force air pretty freely straight through the passage. Of course, together with the removal of the sloughs daily, the cavity was freely sprayed out with an alkaline solution, washing away the debris as well as the pus which found freer outlet from the antrum.

August 25th. On this day the last electro-cautery operation was done, burning away, so far as could be seen, the last remnants of sarcomatous tissue. The lower turbinal was entirely gone, and a large part of the middle turbinal as well. The naso-antral wall was still intact. The movements of the soft palate could be easily observed through the nasal passage, and the patient could blow out that side of the nose with much greater freedom than he could the well side.

For several days the passage was freely sprayed, but as pus was still constantly oozing from the ostium, chloroform was administered to him at the Western Hospital, and I opened the antrum through the central part of the inferior meatus, where the bone was soft and easily penetrated. A wide opening was made, but anterior and posterior to the site of operation, the bone seemed to be of normal density. Probably where opened the osseous tissue was involved in the disease. The operation was attended with very little hemorrhage. Pus, mingled with blood and some sloughing tissue, was washed out, and then the antrum was swabbed with peroxide of hydrogen.

After this date no further operative treatment of any kind was required. The antrum was washed out once a day with warm sterilized water, and for some days this was followed by the application again of peroxide. Then the latter was discontinued as the condition improved. Still the nose was regularly sprayed two or three times a day with Dobelle's solution.

As the operations were comparatively painless, with little loss of blood—the cauterizations being confined to the line of sarcomatous attachment—the depressive effect of the operative

treatment was slight; and for a couple of subsequent weeks, the patient seemed to rally. Then a species of malaise set in, accompanied by rise of temperature, with furred tongue, tympanites and many of the symptoms of typhoid.

The operations being over, he returned home to the care of his family physician; and as the discharge from the antrum steadily decreased the interval between the washings was made longer. From this time I saw him through the kindness of his physician once a week and personally washed out the antrum. Five weeks after opening the antrum it was washed out for the last time as pus had disappeared. There were no sloughs and the water came out of the ostium of a clean, pale, straw color. There was also no return of sarcomatous tissue—the passage being perfectly free from anterior to posterior naris.

In one way I was disappointed. The extra-nasal pus cavity, notwithstanding the regular antiseptic treatment it received, did not close up after the free opening of the antrum, and careful exploration by the probe failed to discover any connection between the two. Still the discharge from the external cavity gradually diminished under treatment, although it did not disappear.

When I last saw the patient in consultation with Dr. Langstaff, six weeks after opening the sinus, the nasal condition was the same, but he was suffering from low delirum, sordes round the teeth, and dark heavily furred tongue. There was some effusion within the abdomen and extremities, although examination of urine showed no trace of albumen.

It seemed to be clearly a case of septic infection, possibly from absorption of ptomaines from the sarcoma, possibly from the long continued presence of pus in the antrum and facial cavity, or from both combined.

The patient died exactly seven weeks after opening the sinus, seemingly not of sarcoma, as there was no visible sarcoma present; but of sarcomatous septic infection.

Fatal, although the result was, I believe the operations, as done upon this patient were both justifiable and advisable; inasmuch as, while the suffering from the operations was slight, the gain in comfort to himself and friends was of a very marked character. The distressing respiration disappeared, the fulness and pressure in the face was relieved, and the progressive deformity of the nose ceased to exist. All these would have been severely and continually aggravated, while life lasted, if relief had not been obtained.

Further still, from my experience in the former cases as well

as in this one, inasmuch as the growth seemed to be entirely removed, I feel convinced that the intra-nasal operations gave greater freedom and comfort to the patient than would have been probable by external operative treatment; and the disastrous results attending the latter in advanced cases are so great that I would not advise it in a case like this.

The advantages of intra-nasal operations over extra-nasal operations, in nasal sarcoma, in cases in which the large bones of the face are not involved, are very marked indeed, while unfortunately, the methods that can be successfully used are very limited. Of my four cases, not one was a pedunculated sarcoma when referred to me for examination. The nearest was the second case, but even in this one the base was as broad as the growth itself. It is impossible to snare these widely attached sessile growths away. And when we try, our earliest reward is more likely to be an alarming hemorrhage than anything else. I well remember such a result in the first attempt at operation in my third case. After applying cocaine and adrenalin freely, I passed a snare along the floor of the nose in the hope of grasping and removing a good sized segment to begin with. For a moment I was delighted with a successful result. A smooth oval piece of the *growth* as large as a pigeon's egg dropped into the bowl. For some minutes I could not examine it, as the hemorrhage was enormous, and required vigorous and tight packing to check it. When, however, I could take a look at my pathological prize, it proved to be a large piece of guaze which at some former time had been inserted in the nose of the patient to check a bleeding and which had not been removed.

Neither can these large sessile growths be cut out of the nose successfully by means of knife or scissors. When small and pedunculated no doubt they can. But as sarcoma of the nose in its early stage is painless, these cases rarely come into the hands of the specialist until they are well developed and have lost their pedunculated form. The base of the growth becomes widely sessile; and it would be simply impossible to dissect out through the narrow naris, such a hemorrhagic tumor as a sarcoma with attachment along the whole of one side of the nasal cavity from the anterior to the posterior choana.

Possibly it is for this reason, that so many of these cases are referred to the general surgeon for external operation, while it would be much better, cosmetically and in every other way for the patient, if the rhinologist could remove the growth intra-nasally.

We are living in an age of brilliant operative surgery, in

which the clean cut, done once and for all, is considered the operation *par excellence*. And it is only natural that the laryngologist should be willing and desirous to emulate his surgical brother in the accuracy and finish and finality of his work—alas for the patient, the finality is sure enough in nasal sarcoma. Leaving out the twenty cases reported in the one instance as all fatal, and the others that either disappeared or were inoperable in the list already given, there were only fourteen permanent recoveries out of the remaining fifty-one cases—27%. I fear this is the worst report that has yet been published; but I have the record over the signatures of the men who so kindly and promptly answered my questions—and all honor to them for doing so.

Granting then that the external surgical operation rarely results in permanent cure; and that internal operation, neither by knife nor snare, nor scissors, nor curette, nor all combined, can remove successfully a large sarcoma having an extensive basic attachment—why not accept the electro-cautery knife as the instrument of excision, when by its judicious and patient and regularly repeated use, the work can be successfully and safely accomplished, for the time at least? Not only can this be done; but by the removal of the sarcoma in this way, we have the additional advantage over an external operation, of retaining a wide patulous nasal cavity, through which the growth can again be attacked and destroyed if recurrence should take place.

The claim I make is, that inasmuch as a large majority of the cases of nasal sarcoma originate in the soft tissues of the nose—even Freeman's case, described so graphically, illustrates this point—they can at almost any time be operated upon with the electro-cautery, provided the bony framework of the nose has not become affected with the disease. That in many of these cases a cure can be accomplished by thorough and careful and painstaking treatment; and that even in cases usually considered inoperable, great and beneficial relief can in some cases be secured to the patient by the same means.

THE OCCURRENCE OF BABINSKI'S SIGN IN NORMAL PEOPLE DURING SLEEP.*

By ROBERT D. RUDOLF M.D., (Edin.) M.R.C.P.
Associate Professor of Medicine in the University of Toronto.

The phenomenon known as Babinski's sign has been known to the profession since 1898, when M. J. Babinski published his discovery of it in *La Semaine Médicale.*

The sign may be shortly described by saying that it consists in such a disturbance of the normal plantar reflex that the great toe and often the other toes as well becomes dorsi-flexed, or extended, when the sole of the foot is irritated, instead of being flexed towards the sole.

If the sole of the foot of a normal infant be stimulated, a number of muscular contractions occur resulting in the extension of the great toe. The other toes are usually also extended and spread apart. Other movements also occur, such as the early contraction of the tensor fasciae femoris, but with these we will not deal. This infantile type of plantar response is the normal one in all apes.

If the sole of an older person be similarly irritated, the great toe and the other toes do not bend backwards, are not extended, but instead are flexed towards the sole. If in an adult, or indeed in any person beyond early infant life, the dorsal type of reflex occurs, then Babinski's sign is present.

Babinski stated that with two exceptions the sign was a certain indication of organic disease of the upper motor neurons, *i.e.*, of the pyramidal system. The two exceptions were that it occurred normally in children who had never walked, and that it was absent in cases of complete transverse lesions of the spinal cord, as were all reflexes.

A great deal has been written about this sign in the last eight years, and it has been very thoroughly tested, and on the whole has stood the test a great deal better than is usual in the case of first statements regarding new signs of disease. A few exceptions have been recorded, some in which no disease has existed in the upper neurons or near them and yet the sign had been typically present, and others in which there has been such disease present and yet the sign has been persistently absent, but in the main the statement made by Babinski has been fully endorsed.

The sign was very fully investigated by Dr. James Collier at the National Hospital for Epileptics, and his article (*Brain*,

*Read before the Clinical Society, Oct. 10th, 1906.

1899), remains the classic upon the matter in the English language. He confirmed in the main Babinski's results, but found that the sign was present in several cases of complete transverse lesion of the cord. Also that it was present for a short time after an epileptic fit, and, as had already been noted abroad, after a poisonous dose of strychnine. But Dr. Collier noted a point, which with a few exceptions, has been persistently omitted by subsequent writers. This point has been the subject of our investigations, and it is that the extensor type of plantar reflex, Babinski's sign, is present in a considerable proportion of normal people during sleep.

He wrote as follows.—"In some children up to the age of twelve years, who presented the adult flexor response when awake, I have observed a most interesting phenomenon. During deep sleep there is a typical infantile response, with the extension and spreading of the toes and eversion of the foot. In children between the ages of six and twelve years this peculiarity was found in a minority of the subjects examined."

Dr. Stanley Barnes later stated (*Review of Neurology and Psychiatry*, May, 1904) that "a healthy child up to the age of eight may give an infantile response if tested while soundly asleep; an adult when asleep never gives an infantile or extensor response. . . . In adults an extensor response never occurs during health; it is always indicative of organic disease."

In a discussion on Functional Paralysis opened by Dr. Buzzard in the Section of Medicine of the British Medical Association in 1902, all the speakers, with the exception of Dr. Judson Bury, agreed that Babiniski's sign was never present except in organic disease.

I was not aware of the exception as regards sleep, and hence was surprised when I discovered that the sign was markedly present in two perfectly healthy deeply sleeping children aged five and seven years. On the advice of Dr. Spiller I started an investigation, and with the willing and able assistance of Drs. Rolph and Masson at the Victoria Hospital for Sick Children and of Dr. Lemon at the General Hospital came to the following conclusions:—

35.5 of all sleeping children between the ages of 2 and 15 years show a marked degree of extensor response to plantar stimulation. About the same number give indifferent results in that the response is either quite absent of any kind or else if neither markedly flexor nor extensor in type. The rest gave a typical plantar flexion. We classified the cases into two classes according as the sleep was deep or light. Of these children deeply

asleep 47 per cent. gave the sign markedly. In the lighter sleepers the sign was present in 22.7 per cent. Among the marked cases the average age was 6.5 years, and the oldest child was 13 years.

As regards the adults, over fifty were examined, but Dr. Lemon found that it was hard to catch them sufficiently asleep in many instances, and he often met with some response other than the Babinski one when he stimulated the soles of insufficiently asleep men and women. However, sixteen of the cases did not wake up and of these three gave an extensor response. They were aged respectively 19, 23 and 84 years and were suffering from pleurisy, convalescing cerebro-spinal meningitis and senility.

Somewhat dubious results have, no doubt, been due to the method of testing for the sign. The method we used was that described by Dr. Edwin Bramwell. (*Clinical Studies*, April, 1905.) The outer part of the sole was stimulated.

In the main our results agree with those of Collier, Barnes, Harris and others, but they go further, in that the sign occurs oftener than has been stated and also occurs in apparently normal adults at times. It would be a tempting subject to theorise as to the cause of this extensor reflex occurring during sleep. It is the normal plantar reflex in young infants and in apes. Do we during sleep hie back to our arborial ancestors? On the surface it would seem that during sleep the upper neurons tend to sleep more deeply than do the lower ones with the result that they tend to lose control of these for the time being.

From a practical point of view it is important to remember that in patients examined during sleep, as children so often are, Babinski's sign is of little value.

Table of Cases Examined for Babinski's Sign.

Children between the ages of two and fourteen years. Examined by Drs Masson and Rolph at the Children's Hospital.

Sleep	Marked Babinski's Sign.	Indifferent.	Absent.	Total.
Deep	23	12	14	49.
Light	10	23	11	44.
	33	35	25	93.

35.5 per cent. of all sleeping children between the ages of 2 and 14 years had the sign markedly.

47 per cent. of all those in deep sleep showed the sign markedly.

22.7 per cent. of all those in light sleep showed the sign markedly.

The average age of the cases showing the sign markedly was 6.5 years.

The youngest was 2 years and the oldest 13 years.

Adult cases Examined by Dr. Lemon at the Toronto General Hospital.

Sleep	Marked Babinski's Sign.	Indifferent.	Absent.	Total.
Deep	1	3	6	10.
Light	2	2	2	6.
	3	5	8	16.

List of Cases showing marked Babinski Phenomenon during sleep, with age.

	Age.
Morbus Coxae	3 years
Pott's Disease	3½ "
Deformed Limbs	5 "
Osteomyelitis	2 "
Ricketts	2 "
Fractured Femur	3 "
Morbus Coxae	8 "
Pott's Disease	8 "
Morbus Coxae	6 "
Pott's Disease	6 "
Anterior Poliomyelitis Acute	2 "
Talipes	3 "
Adenitis	6½ "
Talipes	4 "
Morbus Coxae	10 "
Congen. dislocation of hip	2 "
Morbus Coxae	6 "
Pott's Disease	4 "
Morbus Coxae	11 "
Do	7 "
Ant. Poliomyelitis Acuta	8 "
Conjunctivitis	7 "
Rhinitis	4 "
Vaginitis	6 "
Lachrymal discharge	7 "
Paraplegia	8 "
Osteo-myelitis	3 "
Congenital Dislocation	9 "
Cleft palate	14 "
Fractured Femur	6 "
Osteo-myelitis	13 "
Psoriasis	12 "
Ricketts	4 "
Pleurisy	19 "
Senility	84 "
Cerebro-spinal Meningitis	23 "

Selected Articles

"DUHRSSEN SCNITT" OR VAGINAL CESAREAN, SECTION IN THE TREATMENT OF PUERPERAL CONVULSIONS AND THE REPORT OF A SUCCESSFUL CASE.

By HERMAN E. HAYD M.D., M.R.C.S. Eng. Buffalo, N.Y.

The following instructive case is contributed to the literature of the management of puerperal convulsions.

August 13th, 1906, I was called to see Mrs. Edith K., primipara, aet. twenty-three, who was in convulsions, and I found in attendance Drs. Allen and Baker of Williamsville, N.Y. The first convulsion occurred at six A.M., and she had had seven up to two P.M. Large doses of tinct. veratrum viridi had been administered and half grain doses of codeia hypodermically. She had also taken five drops of croton oil by mouth in solution with olive oil.

After cleansing the vagina and giving a bichloride douche, a vaginal examination was made, when it was found that the os was hard, but slightly dilated and admitted one finger, and there was also a show of blood. An attempt was made to forcibly dilate the cervix, but this was at once abandoned, not only because it was impossible to make any impression upon the tissues, but the irritation immediately brought on a terrific convulsion. A second convulsion occurred in about half an hour and it was then decided to remove the patient to the German Deaconess's Hospital for operation. The baby was alive, as was made out by stethescopic examination over the bare skin, the heart beats being strong, and the term of pregnancy about eight and a half months. While in the ambulance en route to the hospital the patient had two more seizures. She reached the hospital about five-thirty P.M., and was at once taken to the operating room and prepared for operation.

Chloroform was administered, the bladder was emptied and the urine quickly examined, which was found to be nearly solid by the heat and nitric acid test. After shaving and scrubbing the parts thoroughly, the cervix was seized by two volsellum forceps and pulled well down into the vagina, and with a scissors a long anterior incision was made up to the vault. A transverse cut

was then made across the roof of the vagina and the bladder and soft parts were quickly separated and pushed well up upon the uterus. Upon passing the finger into the uterus a few fibers of the sharp internal os, or Bandel's ring, remained undivided. These were severed with a blunt bistoury well up into the body of the uterus. There was no hemorrhage. The membranes were then broken and the position of the child accurately determined —left occipito-anterior—the forceps applied and the delivery was slowly and cautiously effected, but with considerable force and some difficulty. After the head had engaged in the vagina and was well upon the perineum, the forceps was removed, the head and shoulders were carefully delivered, and the baby—a boy weighing six and three-quarters pounds—was given at once to the assistant, who spent at least thirty minutes in energetic and resourceful efforts at resuscitation.

The placenta was delivered in due time and the cervix was immediately sewed up, as were some tears in the vagina due to the blades of the instrument—and a piece of iodoform gauze was passed up into the uterus through the united cervix. The patient was put to bed in excellent condition. A quart of salt solution was now injected into the loins, in the hope of further flushing the kidneys, and a hypodermic of morphia—¼ grain—was ordered every third hour.

At seven-thirty P.M., she had a convulsion and also a slight one at four-thirty A.M. The next day, August 14th, her condition was excellent; pulse 86, temperature 100°. The morphine was discontinued, and high-up rectal injections of a pint of salt solution were administered every fourth hour. The bladder was emptied by catheter every six hours, and a copious supply of urine was obtained each time. In the evening she began to swallow water and then there was added one drachm of a saturated solution of sulphate of magnesia every half hour until free catharsis resulted.

August 15th.—Temperature 99; pulse 72; condition excellent. Mind a little hazy, and taking water freely in large amounts.

August 16th.—Temperature and pulse normal; mind clear. Milk was now administered and baby placed to breast. Gradually a semi-solid diet was given and on the seventeenth day the patient left the hospital well and strong, with the vagina and cervix healed perfectly.

This case demonstrates clearly, first, the wisdom of emptying the uterus as quickly as possible in a bad case of convulsions; and second, the ease and facility with which delivery can be

accomplished by employing the anterior cervical incision of Dührssen. I am satisfied that without surgical intervention in this case we should have lost both baby and mother, because the patient had already had ten convulsions before the delivery was brought about, and was a primipara in whom after many hours of waiting and delay, dilatation had only commenced.—*Buffalo Med. Jour.*

IRRIGATION AND DRAINAGE OF THE SEMINAL DUCT AND VESICLE THROUGH THE VAS DEFERENS.

By WILLIAM T. BELFIELD, M.D.

(Abstract from Proceedings American Association of Genito-Urinary Surgeons June, 1906.)

The vas deferens can easily be brought by the fingers against the skin of the scrotum and held there by a half-curved needle passed through the skin under the vas. A half-inch incision through the skin and envelopes of the spermatic cord—painless under local anaesthesia — exposes the vas. A transverse or longitudinal incision into the vas opens its canal. The blunted needle of a hypodermic syringe can be passed into this minute canal and a watery solution of any desired agent injected; this liquid traverses the vas and the ampulla, and distends the seminal vesicle.

This operation, and its utility in the treatment of gonorrhoeal and other pus infections of the seminal vesicle, were presented by me to the Chicago Medical Society and described in the Journal of the American Medical Association (April, 1905). Further experience has improved the procedure and widened its scope. When deemed necessary, the vas is stitched to the skin by a fine silkworm gut suture which passes through the lumen of the canal at each cut surface. Thus a fistula is maintained so long as desired; and through this fistula the vas and vesicle may be injected daily. Moreover the vas serves as a drainage tube for the ampulla, which drainage may be facilitated by passing a fine silkworm or horsehair thread along the vas to the ampulla, where it is left until removed for the next injection.

By this procedure direct, repeated and successful medication of the vas, ampulla and seminal vesicle is for the first time made possible, and without a serious operation. I have usually made

the operation in my office, often unassisted, the patient walking away at its conclusion and losing no time from his vocation.

Irrigation and drainage of the seminal duct and vesicle I have found to be invaluable in the treatment of the following conditions:—

1. Chronic gonorrhoeal infections of the seminal canal (vesiculitis), with or without a gleety discharge.
2. Chronic pus infections of the seminal canal in the middle-aged and elderly, (usually mistaken for enlarged prostate).
3. Recurrent epididymitis, which results from repeated invasion of the epidiymis by an infection persistent in the seminal vesicle or deep urethra.
4. Acute gonorrhoeal spermato-cystitis; in this condition and in other severe infections, incision into the vesicle from the rectum with the galvano-cautery is sometimes desirable for the immediate relief of severe symptoms. Liquids injected into the vas then escape into the rectum.

In two cases of acute gonorrhoea which presented the symptoms usually preceding extension to the epididymis, including pain and tenderness in the inguinal canal, the vas was opened and injected with argyrol solution. No epididymitis occurred; but further experience must determine the possibility of averting gonorrhoeal epididymitis by this simple procedure.

In one case of tuberculosis of epididymis, vesicle and prostate, the vas and vesicle were irrigated with carbolic acid solution—after Rovsing's method for vesicle tuberculosis—without appreciable benefit.

The first injection into the vesicle should not exceed 30 minims; a larger amount may cause painful contractions of the vesicle—spermatic colic—and retention of urine, both of which effects I witnessed in my early work. As the inflammatory swelling subsides, the subsequent injections may be carefully increased in quantity.

When complete division of the vas has been deemed wise, end-to-end anastomosis is easily made, after freshening the cut surfaces in old cases, by running a fine catgut or silkworm suture through the lumen of each cut end. That the catgut is absorbed I have witnessed in dogs; if silkworm gut be used, the ends may be brought through the skin and tied loosely outside, and removed at the end of a week or more. In either case the lumen of the vas is maintained during healing. The fistula made for treatment is closed in the same way.

The infections of the seminal vesicle and vas constitute a neglected field; for the symptoms caused by spermato-cystitis-

pyuria, frequent and painful urination, even complete retention of urine—are generally referred to the bladder and the prostate, and treated as cystitis and prostatitis. If the subject be above forty years of age—and spermato-cystitis is common after that period—he is charged with harboring an enlarged prostate and advised to submit to prostatectomy. These are the cases that were temporarily benefited by resection of the vas deferens, when that operation was popular.

By my method, these very important because very common ailments are made amenable to treatment without danger to the patient or to his sexual function. It is well known that even complete occlusion of both seminal canals, as by double gonorrhoeal epididymitis, does not impair sexual desire or capacity, though preventing the passage of spermatozoa into the urethea. and my operation does not even occlude the vas.

The suppurating seminal vesicle has been exposed and drained through an extensive perineal incision similar to that for perineal prostatectomy. This operation, first practised by Dittel and recently modified by Fuller, is severe and bloody, entailing risks and requiring weeks of confinement; it seems justified, if at all, only in cases of peri-vesiculitics. The method that I have devised, with or without a cautery incision from the rectum, suffices for the treatment of the vesicle, as well as the ampulla and vas.

NOTE.—We have washed through the vas deferens in chronic inflammation of the seminal vesicle with great benefit, the operation is painless when carefully done and the result satisfactory.

Progress of Medical Science.

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Prostatectomy.

A. H. Ferguson, Chicago (*Journal A.M.A.*, October 13), classifies the cases of prostatic hypertrophy as follows: 1. Cases manifesting genito-urinary functional disturbances in the first congestive stage of the disease, in which proper hygienic and local treatment may effect a cure, or at least in some cases avert operation. 2. Cases with partial retention, in which the condition progresses insidiously revealing itself in an acute attack of retention with subsequent residual urine and the necessity of catheterization, or more chronic gradual distention of the bladder with intermittent dribbling of urine. 3. Cases with complete retention with frequent involuntary urination and almost constant dribbling at night. 4. Cases of absolute incontinence and no residual urine. Prostatic enlargement does not always call for operation: the gland may be extremely large and yet cause no obstruction. Obstruction is the one important thing. Ferguson enumerates in detail the pathologic indications for prostatectomy; the conditions that interfere with the function of the vesical meatus; the obstruction of the flow of urine in the prostatic urethra; the contraction and cicatrization of the organ from chronic inflammation, the deleterious effect of prostatic obstruction on the bladder, kidneys and rectum. He reviews the literature bearing on complication, sequelæ and mortality, and describes his own practice in performing the perineal operation. He puts the patient preferably in the extra lithotomy position, and, while he prefers to open the membranous urethra and proceed down to the sinus pocularis at the point where the ejaculatory ducts open, he has frequently removed the prostate without any injury to the membranous urethra. After splitting the capsule laterally, it is best to enucleate the lateral lobes first, carefully avoiding injury to the ejaculatory ducts. The finger is pressed into the prostatic urethra and acts as a guide while the fibrous attachments between it and the prostate are cut away with cutting forceps. In case the ducts are pushed to one or both sides, and the prostatic enlargement rises up into the bladder, he inserts the depressor into the bladder through the perineum to aid the finger in the enucleation. Care should be taken not to injure the vesi-

cal sphincter in removing prostatic nodules behind the bladder and it is best, he states, to do this, piece by piece, with the biting forceps. When there is a polypoid middle lobe projecting into the bladder he removes it by way of the internal vesical orifice. While it is sometimes impossible to save the upper prostatic urethra, especially if the enlargement completely surrounds it, it is not necessary to remove the whole of it as is done in the suprapubic operation. In suitable cases it is possible to remove the whole prostate without injury to the bladder, ejaculatory ducts or prostatic urethra. In cases in which there is no necessity of saving the procreative power, ejaculatory ducts are deliberately severed and this expedites and facilitates the operation. If it is very desirable to save the ducts, Ferguson says another expedient may be adopted which aids as a guide to save them. This is to open the inguinal region and seeking out the vas deferens, to pass a fine probe down to the sinus pocularis. The best material he has found for this is fine aluminum bronze wire doubled on itself. If catheterizing the ducts is impracticable, methylene blue can be injected which will make it possible to recognize this tissue if it is injured. He makes it a practice to stain the bladder and prostatic urethra in all cases, and before operating to wash it out of the bladder and in its place leave a solution of boric acid, sufficient to distend the bladder to its utmost capacity. As regards drainage he thinks the technic is improved and convalescence hastened by draining through the penis by an ordinary retention catheter, No. 23, American. The article is very fully illustrated.

Anastomosis of the Vas Deferens.

G. F. Lydston, Chicago (*Journal A. M. A.*, July 21), reviews the objections to and the indications for vasectomy, and points out that it is a perfectly safe operation when properly performed, and that while it has a profound influence on the innervation and circulatory supply of the prostate and seminal vesicles, it does not necessarily cause permanent sterility. It has a certain range of application in sexual neurasthenics, spermatophobiacs and in genuine spermatorrhea. In intractable prostatitis and seminal vesiculitis it is of the greatest value and deserves a trial before the major operations. Recurrent epididymitis also furnishes an important field for this operation, and it has a certain range of application in suspected or known tuberculosis or malignant disease of the testes. In some cases of enlarged prostate with hemorrhages from the vesical neck, unsuitable for the radical operation, he has succeeded in so improving the conditions by a preliminary vasectomy that a prostatectomy could

be performed. In enlarged prostate when prostatectomy is disallowed or is inadvisable, vasectomy is indicated. The technic of the operation is described. In a certain, as yet undetermined, number of cases it is possible to re-establish the continuity of the vas deferens after a previous vasectomy has been performed. The chief indication for this is in cases of accidental severance of the vas, but in case of double resection, followed at a longer or shorter period by anastomosis, there are two chances of restoring fertility. One or the other vas is liable to regain patency. The time that should elapse between the vasectomy and the anastomosis varies, of course, according to the improvement in the condition for which the vasectomy was performed. Lydston describes his method of anatomosis, which consists in excising the nodule at the point of resection, bringing the two ends together and uniting them after having inserted into their lumen a strand of large-sized silk-worm gut, the proximal end of which is passed out by the threaded needle about in inch and a quarter above the anastomosis and out through a puncture in the skin a little above the upper angle of the wound. The object of this silk worm gut thread is to preserve the continuity of the lumen and it should be removed at the end of a week. A portion of the free edge of the fascia, which was divided to expose the parts, is wrapped closely around the vas so as to close it in completely. The fascia is closed with fine catgut and the edges of the scrotal wound brought together with fine silk worm gut or horsehair. There is very little reaction after the operation, though a certain amount of exudation and nodulation may be perceptible for several weeks. Out of four cases thus operated on, one patient has shown, microscopically, a restoration of function by the presence of spermatozoids in the urine, one is apparently a failure, and there has been no opportunity as yet to determine the condition in the other two. The operation is illustrated.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

The Open-Air Treatment of Pneumonia.

W. P. Northrup, New York City (*Journal A.M.A.*), for over eleven years has been using free ventilation and fresh air treatment in pneumonia, and during the last year he has followed the practice of putting his patients in the New York Presbyterian Hospital for six hours a day out on the roof in all weather

in which harsh high winds, rain and snow did not prevent. He gives histories of two cases, both serious, and in one of which he thinks the patient could not have recovered under other treatment. The hospital authorities are so well satisfied of the value of this method that they are making a colossal roof garden on the medical side of the hospital to be an open-air ward for these cases. The patients most favorably affected by open-air treatment are those with severe poisoning, with delirium, partial cyanosis or deep stupor. In Northrup's experience all patients do better in cool fresh air, which can be secured in private practice by screening off a portion of a room by an open window. None have been harmed, in his observation, and some have been greatly benefited and possibly saved by the cold fresh-air treatment. If pneumonia, due to an infecting agent, is thus benefited, the value of the treatment for other infectious diseases is suggested, and, in fact, he has tried it in many others, including typhoid fever with severe bronchitis, whooping cough with bronchitis and convulsions, with excellent results. He considers it, in fact, the ideal treatment for septic fevers. The only regulation is to keep the patient comfortable and especially to keep the feet warm.

A Review of Fifteen Hundred Operations Upon the Gallbladder and Biliary Passages.

Mayo (Annals of Surgery) analyzes the work of his brother and himself in this field between 1891 and 1906. He considers the three most important considerations to be the mortality, the permanence of cure, and the disability arising from the operation. The mortality in the 1,500 operations was 4.43 per cent. This includes death from acute perforations with septic peritonitis, malignant disease, pulmonary embolus, myocarditis, and various chronic conditions. Of the 845 cholecystostomies the mortality was 2.13 per cent. This is the normal and the safest operation. Future trouble after this operation may come when the cystic duct is obstructed, the gallbladder taking no part in the biliary circulation, and when it is thick walled and functionless. In common duct operations a functionating gallbladder should not be removed except for direct indication. Of 319 cholecystectomies 3.13 per cent. were fatal. The authors prefer this operation when the organ can be easily removed, and the disease is confined to it. Of 207 operations upon the common duct the mortality was 2.9 per cent. in cases in which there were no immediately active symptoms, 16 per cent. when there was active infection in the common duct and in the ducts of the liver, 34 per cent. when there was complete obstruction of the common

duct, and 33 1-3 per cent. when there was malignant disease. In eighty-six of the 1,500 cases there was involvement of the pancreas and eight were fatal. The lesson from this experience was that early operations were most likely to be successful.—*New York Medical Journal.*

Exercise for the Lungs.

Frederick Rogers, in the *Medical Record,* of Oct. 6th, reviews at some length the relations between the playing of wind musical instruments and pulmonary disease, with special reference to tuberculosis of the lungs, both as an etiological factor and a curative agent. He fails to find that musicians are particularly subject to such diseases as emphysema, in so far as their occupation is involved. In selected cases he advises in the early stages of phthisis the substitution of exercise for the lungs by means of playing wind musical instruments, for the usual pulmonary gymnastics, the moral effect of the former is also a factor to be reckoned with; as a prophylactic agent in the predisposed, it is also worth consideration, and in his opinion not fully recognized.

Cranial Percussion.

In the *Medical Record,* of the 29th of Sept., Henry Koplik discusses the use of percussion of the skull as a means of placing the indication for the performance of lumbar puncture, with special reference to its application in cerebrospinal meningitis of the epidemic type. As a therapeutic measure lumbar puncture is applied in the various forms of hydrocephalus, whatever its cause, acute or chronic, but it is of questionable use in such diseases as tumar cerebri, etc. In cases of meningitis, the first result of intra-cranial pressure is to distend the ventricles with fluid, and it is the early detection of this fluid which gives us the absolute indication to relieve the distention by means of lumbar puncture. The mode of detecting ventricular distention by means of percussion is discussed by McEwen in his work on pyogenic disease of the brain and cord, and he describes accurately the elicitation of a differential note, this note elicited at a given spot (as the pterion) varies with position of the head, it has a peculiar musical, tympanitic quality, conveying the idea of hollowness. Koplik recently showed that certain cases of cerebrospinal meningitis exist, in which apparently puncture is indicated, on account of symptoms as sopor, headache, delirium, and hyperaesthesic, pointing to intra-cranial pressure, but in which pressure cannot be shown to be present, in this class as in

the toxic class, beyond being of use in diagnosis, puncture is useless. He concludes that lumbar puncture is of value only in such cases as can be definitely shown to have an increase of intraventricular pressure, and that at present percussion is our only means of determining its existence, without using puncture as a diagnostic agent.

B. O'R.

Value of Tuberculin Reaction.

At the recent meeting of the Budapest Inter-hospital Association Dr. Schmidt discussed the value of tuberculin reaction. He proved that the tuberculin reaction is not infallible in the diagnosis of tuberculosis. His technique is as follows: After absence of fever has been assured for several days by four hourly measurements, one m. of tuberculin in fresh solution is injected, then after four to five days, five times this amount. In sixteen cases with positive reaction, tuberculosis was found at autopsy in only nine; in two carcinoma of the liver and stomach were the sole lesions, in five other pathological conditions. In one there was no reaction, yet evident tuberculosis. Despite such small doses and great care in injecting, serious accidents may occur, and a latent process may suddenly become active and even lead to a rapid fatal issue. This happened to the author in three cases—one of leprosy (in Bosnia) combined with tuberculosis, and one of affection of the serous membranes. A source of error is to be found in hysterical patients; they sometimes re-act after tuberculin injections and even after injections of plain water.—*Medical Press.*

Russo's Reaction in Enteric.

Russo, of Catania, has recently introduced a substitute for the "Diazo" reaction as used in typhoid fever. His method is to add 4m of a 1-1000 solution of methylene blue to 4 c.c. of filtered urine; in the event of a positive reaction a uniform emerald green color is observed in shaking the test tube; if the result is negative the solution retains its blue tinge, or at the most only a faint greenish tint is seen. Rolliston reports in the *Medical Press* of September 19th his conclusions after a series of practical tests, which corroborate the findings of Russo. He believes that the reaction is more constant in enteric fever than the "Diazo" test, that its disappearance coincides generally with the commencement of lysis and is a more certain sign of convalescence than the older method, also that in relapses Russo's more frequently becomes again positive.

In common with the "Diazo" it is often detected at an

earlier stage in the disease than Widal agglutination reaction. Unfortunately he has also found it positive in measles, contrary to Russo's experience. Rolliston finds it occasionally present in lobar and broncho-pneumonia, diphtheria and scarlet fever, consequently he does not believe it to be of great diagnostic value.

B. O'R.

Salt in Nephritis.

A note in the *Boston Medical and Surgical Journal* takes up the question of limitation of ingestion of Na. Cl. with the food in chronic or renal disease. Certain authorities argue that the quantity of salt required by the human organism for its healthy action is comparatively small. In view of the theory of Widal and Juval that a retention of sodium chloride in the tissue results in an œdema, on account of the residual salt of the tissues requiring a certain amount of water to maintain proper molecular concentration, the advisability of the normal saline injections so frequently administered in nephritis is also called into question. B. O'R.

Diabetes.

Williamson, in the May number of *Medical Chronicle*, reports on the treatment of the milder forms of diabetes mellitus with aspirin, apparently its value is limited to these cases. In a series of experiments he allowed the ordinary hospital diet, excluding only sugar; white bread, rice and starches, etc., being admitted. For the first few days no drugs were given, the sugar being carefully estimated daily throughout the treatment; salol and camphor were then administered for periods of about a week each, with but little diminution in the daily excretion of glucose. Aspirin was then substituted in doses of gr. xv. every four hours and a progressive fall in the sugar index was noted, in some cases it entirely disappeared after a few weeks. In view of the above aspirin at least seems worthy of a trial. No explanation of its action is attempted.

Editorials.

PUERPERAL ECLAMPSIA.

We publish in this issue an interesting report of a case of puerperal convulsions in which vaginal caesarean section was performed with gratifying results.

It is now many years since Dührssen first proposed incisions of the cervix for rapid delivery of the child, although the procedure was really an old one which had been practised long before Dührssen was born. As this distinguished obstetrician has changed his method of procedure so frequently, and adopted so many different forms of procedure, there is a certain amount of confusion as to what his methods really are. However, we believe that we are right in saying that his chief incisions in a case of this sort are the anterior (and frequently posterior) incision of the cervix, and the transverse incision of the anterior vault of the vagina. In certain cases he also makes a perineo-vaginal incision which includes the tendons of the levator ani muscle. We do not know why in Dr. Hayd's operation the name "Senitt" is used in connection with that of Dührssen. We think, however, that in this case the surgeon did an operation that was perfectly justifiable, and that the results were all that could be desired. Opinions differ very materially as to the advisability of such an operation when eclampsia occurs before labor.

It unfortunately happens that emptying the uterus does not always stop the convulsions. It is also a fact that accouchment forcé, whether by Harris' method, or Edgar's method, while the cervical canal is intact, is exceedingly dangerous, while the use of any form of bag or ballon is both unsatisfactory and dangerous. Therefore many conservative obstetricians prefer not to treat eclampsia occurring before labor by any attempt at emptying the uterus, but rather by the use of medicines.

We think opinions have materially changed during recent years since Dührssen's methods have been carefully studied. We believe that in skilled hands, especially in well ordered hospitals, the operation as performed by Dr. Hayd is generally suit-

able and the results usually satisfactory. Unfortunately, however, Dührssen's vaginal caesarean section is a difficult operation which cannot be safely performed as a rule in private practice. Even in cities well supplied with hospitals and skilled surgeons no definite rules can be laid down which all agree to.

There is one very important consideration, however, in connection with this subject; and that is that an immediate operation in skilled hands (so far as the operation itself is concerned) is generally safe for the mother, and, at the same time, greatly improves the chances of the unborn babe.

MILK.

There are beginning to appear in the public press some signs of a consciousness that our milk supply might be improved. Some citizens have even been so rash as to object to the addition of water to the same. But the most serious thing, much more serious than the addition of water, has never yet been alluded to in the public discussion of the matter, we need not say that we mean the addition of dirt. Dirt means germs and germs mean poison. Dirty milk fed to an infant often poisons it as surely as strychnine. Indeed, the person of our acquaintance who knows most about milk, who knows, indeed, all about it as far as Ontario is concerned, can by no means be persuaded to take a glass of milk. Knows too much about it.

We must attend to this subject. Milk is probably the most dangerous food we have. The cow, the place of milking, the utensils, and the milker, should all be in a safe and clean condition. At present they are not, as a rule. And just as soon as we, who pay for milk, make the personal acquaintance of the cow, and see for ourselves the condition, and demand clean milk, just so soon we shall get it. It is significant, as showing that this matter is neglected, that in the 2nd edition of Prof. Dean's excellent text book on Dairying (Toronto: William Briggs), this part of the subject is dismissed in half a dozen lines, although the book itself is in other respects a most valuable exposition of the subject. Every physician has a professional,

as well as a personal interest in this matter. If the milk supply in Ontario is to be improved, it will probably not be until we draw attention to the matter, and do our part towards finding a remedy for the existing state of things.

THE RUGBY FOOTBALL.

The students of the University of Toronto were sadly unfortunate at the commencement of their season of sports. Before a rugby match was played two young men were killed, and two seriously injured in ordinary practice play. The first victim was Mr. Cameron Paulin, a second year student at the School of Practical Science. He was playing on the University campus on the afternoon of Oct. 4th. During the play he was injured, and after a short rest went to the gymnasium to change his clothes; while there he was seized with dizziness and soon became unconscious. He was removed to the General Hospital, but never regained consciousness, and died about half past ten that night.

The second victim was Mr. W. Glynn Ellis, of 15 Elm Ave., Toronto, a fourth year student in Arts. He was taking part in a practice game, Oct. 10th, when he received an injury which made him feel quite ill. Although his illness was not considered very serious for a time he died on the following day.

The inexpressible sadness connected with the death of these two popular young men caused the greatest gloom which has been known in University circles since the Battle of Ridgeway in 1866.

One of the students injured, Mr. Ray Forsythe, is suffering from the effects of a serious fracture of the leg.

THE CANADIAN MEDICAL ASSOCIATION.

We have received from Dr. George Elliott, general secretary of the Canadian Medical Association, a report of the Special Committee on Re-organization, with a book of the proposed new situation and by-laws. One of the most important recommendations is

the proposal to create an executive council, which shall be the business body of the association. It is proposed that it shall consist of delegates elected by the affiliated societies, the Dominion and Provincial Boards of Health and the Canadian Medical Association. It shall elect all officers of the association except the president by ballot, and transact all the general business of the association. It shall determine the time and place of the annual meetings of the association. The executive shall annually appoint five of its members as a Finance Committee which shall also be a Publishing Committee. Funds for the purposes of the association shall be raised by an equal annual assessment of $5.00 upon each ordinary member, and in any other manner approved of by the Finance Committee.

The following clauses refer especially to the Executive Council:—

1. No one shall serve as a member of the Executive Council who has not been a member of the association for at least two years.

2. Members of the council shall be elected for every year.

3. Every affiliated medical society shall be entitled to elect one or more delegates.

4. At each annual meeting 15 members shall be elected by ballot to act on the Executive Council for one year.

5. Every three years the Executive Council shall appoint a committee of five to examine the registers of membership of the affiliated societies.

SIR A. E. WRIGHT'S VISIT.

Toronto was honored, during the first week in October, by the visit of an eminent English physician, Sir A. E. Wright, one of the few men who has received his Knighthood for original research. During his short stay in the city he delivered two addresses—one as the opening lecture to the Medical Faculty, which we are able to report in full, and the other at a meeting of the Toronto Medical Society, both of which were exceedingly instructive and attracted large audiences.

Before the Toronto Medical Society, the subject of the address was "The coagulability of the blood and its practical application." Prof. Wright devised a method of estimating the time taken for blood to clot, and found that although this occurred in a normal individual in about 1½ minutes, there were very wide variations. He also observed that in some diseases such as urticaria and eczema the blood coagulated very slowly, while in others, as in convalescing typhoid, the clot was formed almost instantly. A further research also revealed the fact that the time of coagulation could be retarded by the administration of citrates or tartrates, and the formation of the clot could be hastened by giving the patient some salt of calcium or magnesium. The lecturer spoke of his own troubles with urticaria, which he invariably had after eating fruit. This contained citrates in abundance, the normal calcium salts of the blood were precipitated, coagulation was more difficult, and a certain amount of serum made its way through the vessels and appeared on the surface as wheals. These were relieved in a very short time by taking calcium chloride or magnesia. Similarly, in those surgical wounds with dry surfaces which refuse to heal, the administration of citric acid by lessening the power of coagulation, causes serum to exude and the cut is soon healed.

The thrombosis which occurs in about 6% of all patients recovering from typhoid was due to the excessive amount of calcium salts taken in the form of milk, during the course of the fever. About the third week these accumulate so much as to cause marked increase in the coagulability of the blood, and a clotting takes place in one of the vessels. This can be avoided entirely by administering citrates.

In replying to the vote of thanks at the conclusion of the meeting, Sir Almroth expressed himself with no uncertain sound upon the medical teaching which fills the student with theory and does not teach him how to apply it. A great deal of the laboratory work, as carried out at the present time, was useless for this reason. The laboratory worker should spend part of his time at the hospital, and his experiments are not complete till they are taken to the bedside.

It is seldom that the medical profession of this city are favored

with an address so full of practical points, and so bristling with interesting results. We hope Sir A. E. Wright may visit us again.

THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS.

The *London Lancet* recently submitted to those it considered most able to answer a series of questions, soliciting their replies for publication.

In the January sixth number of 1906, they publish the replies at length. The questions were as follows:—

1. Has experience demonstrated the therapeutic value of the sanatorium treatment generally?

2. Are successful results obtained usually (a) in well-to-do patients; (b) in the working classes?

3. In the working classes must an elaborate system of insurance be combined; and are convalescent homes necessary to prolong the treatment?

4. What are the arguments for believing that the educational value of sanatoriums will be great and widespread?

5. Sanatoriums are considered by some people as places where severe cases may be segregated and by others as places where incipient cases may be cured. Ought there to be two sets of buildings?

6. What is a medical officer to say when he is asked whether a county authority or a private philanthropist is doing the best for tuberculosis by building a costly sanatorium?

Sir Richard Douglas Powell favored judicious sanitariums and hospital treatment and asserts that sanitaria are essential to success. His paper explains details at length and with ability.

Sir William H. Broadbent gives an affirmative answer to all these questions, and favors in answer to the 5th, isolation and separate wards, but not separate buildings.

Dr. Theodore Williams answers these questions in the affirmative, and as to segregation favors three classes of buildings: 1. A hospital for acute cases. 2. A sanatorium for patients with

incipient and limited lesions. 3. A settlement or colony for assorted cases where light employment might be utilized.

Dr. J. Kingston Fowler refers in his answer to his well-known paper on the open air treatment read November 14, 1899. He endorses the Nordrach System as confirmed by his experience and observation since 1899, which is:—

1. An absolutely open air life day and night, in sunshine, fog or rain.

2. No liegehalle.

3. An abundant diet, regulated by the physician in charge, who must attend at all the meals.

4. Rest before meals.

5. Exercises regulated by the strength and temperature of the patient.

Dr. Fowler goes into extended details and gives strong arguments and strong conclusions in support of his views. He thinks every hospital should have a sanatorium attached.

NOTES.

We understand that Sir Victor Horsley expressed the opinion that the Toronto meeting of the British Medical Association was the best ever held from a scientific standpoint, excepting, perhaps, that of 1886.

Notices have been sent to many physicians throughout the United States and are appearing in the medical and public press regarding an "American International Tuberculosis Congress" to be held in New York City, November 14th to 16th next, and an association known as "The American Anti-Tuberculosis League," which is to meet in Atlantic City next June at the time of the meeting of the American Medical Association.

It should be stated that the gathering in New York next November and the one in Atlantic City next June have no connection whatever with the International Congress on Tuberculosis authorized at the last session in Paris in 1905, which will hold its

meeting in Washington in 1908 under the auspices of the National Association for the study and prevention of tuberculosis.

We are assured by Professor Adami that his name has been advertised in connection with the former schemes wholly without his authority, and that to his knowledge no physician of repute in the United States has signified his participation in the above "American International Tuberculosis Congress."

The next annual meeting of the British Medical Association will be held in Exeter, Devonshire, one of the most beautiful counties of the south eastern portion of England. The population of Exeter is about 47,000. Dr. Henry Davey of that city will be the president.

Senate of the University of Toronto.

At the election of the Senate of the University of Toronto, the following were elected to represent the graduates in medicine. The total vote was 1,421, of which Dr. H. J. Hamilton received 1,175, Dr. Chas. Hastings, Toronto, 826; Dr. W. H. Harris, Toronto, 708, and Dr. Wm. Burt, of Paris, 625.

The following nominees were not elected, Dr. Angus McKinnon, Guelph, 580; Dr. R. B. Nevitt, Toronto, 395; Dr. W. J. Wagner, Toronto, 315; Dr. R. T. Shiell, Toronto, 197.

We understand that Drs. Wagner, Burt, Nevitt, McKinnon and Shiell were nominated without their knowledge or consent, and most of them took no active interest in the election.

The election was purely friendly and personal in character, there being no special issues before the electors. We think that Dr. Burt and Dr. McKinnon would have been excellent representatives from districts outside of Toronto.

The following representatives of the medical faculty were elected: Dr. D. Gibb Wishart, Dr. Jas. F. W. Ross, Dr. Geo. Bingham, and Mr. Irving Cameron, all of Toronto.

Personals.

Dr. Frank Martin, of Dundalk, has been appointed an Associate Coroner for the county of Dufferin.

Dr. Andrew Gordon returned to Toronto, Oct. 7th, after a visit to Winnipeg.

Dr. J. E. Elliott, after a pleasant motor trip to Cleveland, returned to Toronto, Oct. 8th.

Dr. Goldwin Howland, who was married in London, England, in September, has returned to Toronto, and is practising at 540 Spadina Ave.

Dr. W. Harley Smith is the Honorary Vice-President of the Anglican Club, in connection with Wycliffe College for the coming year.

Dr. E. K. Purvis has gone to London, Eng., to take a special course in diseases of the eye, ear, throat and nose in Moorfields and Central London hospitals.

Professor Wm. Osler, of Oxford, will leave England in the latter part of November to attend the gathering of the "Osler Clan" to celebrate the anniversary of his mother's birthday, December 15th, when she will be one hundred years old. No jokes about the "chloroform age" will be in order on this interesting occasion.

Dr. C. P. Coughlin, of Peterboro', has been appointed superintendent of the Institute for the Deaf and Dumb, Belleville, Ont., in the place of Mr. R. Mathison, resigned. Dr. Coughlin graduated in 1890, and after practising for a number of years in Arthur removed to Peterboro' in 1902. As announced in our last issue he was appointed by the Ontario Government a member of the new Provincial Board of Health. We learn from the daily papers that when he lived in Arthur he was the Conservative candidate against Hon. J. M. Gibson in East Wellington. It is also stated that he has always been an active politician. We presume, therefore, that he is well qualified for the new position which he has been called upon to occupy.

Obituary.

CAPT. LOUIS P. FARREL, M.D.

Capt. Farrell, the second son of the late Dr. Edward Farrell, of Halifax, died at Satara, Bombay, September 12th. He graduated from Dalhousie in 1899 and went to Great Britain the same year. After receiving the double surgical and medical qualification of London in 1901 he joined the Indian Medical Service, contracted fever in 1904, and was never robust afterwards. His death, however, was sudden and unexpected, and the immediate cause is unknown at the time of writing.

FRANCIS PERCIVAL COWAN, M.D.

Dr. Frank Cowan, of Toronto, died at the Western Hospital, October 17th, aged 40. He graduated, M.D., Trinity University in 1888, and after acting one year as a resident physician in the General Hospital commenced practice in Toronto. He was very popular and successful for a time, but in about five years his health failed and he did but little active practice during the last twelve years.

JAMES STEWART, M.D.

Canada has lost one of her ablest physicians through the death of Dr. James Stewart, which occurred at his home in Montreat, Oct. 6th, following a recent stroke of paralysis.

After graduating from McGill University, Montreal, in 1869, he went abroad and did post graduate work in Edinburgh, London, Berlin and Vienna. After returning to Canada he settled in the county of Huron, practised for a time at Verna, and then for a number of years at Brucefield. He was called to McGill about twenty years ago, and was appointed Professor of Materia Medica and Therapeutics. He devoted himself to medicine for a number of years, and especially to diseases of the nervous system, and for some time was senior physician in the Montreal General Hospital, and at the opening of the Royal Victoria Hospital became Physician-in-Chief of that institution.

He possessed great ability, untiring industry, and was an

admirable teacher and practitioner of medicine. Although somewhat reserved, he was very much beloved by his intimate friends, and very highly respected by all his acquaintances.

GEORGE S. ARMSTRONG, M.D.

Dr. Geo. S. Armstrong died at his home in Spokane, Washington, Oct. 3rd, aged 48. He was born in Flesherton, Ont., and received his medical course in Trinity Medical College, Toronto. After taking a post graduate course in Great Britain he returned to Canada, and was one of the surgeons during the construction of the Canadian Pacific R.R. on the North Shore of Lake Superior, and was subsequently associated with Dr. Sproule, M.P., at Markdale, Ontario. Nearly 20 years ago he settled in Spokane, and continued in practice there up to the time of his death. He was for a number of years recognized as one of the leading surgeons of the Pacific Coast.

Book Reviews.

The Operating Room and the Patient. By Russell S. Fowler, M.D., Surgeon to the German Hospital, Brooklyn, N.Y. Octavo of 172 pages, fully illustrated, Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $2.00 net. Canadian Agents—J. A. Carveth & Co. Limited, 434 Yonge street, Toronto.

Dr. Russell Fowler's admirable book is the only work on the market devoted entirely to operative technic, with the pre-operative procedures of sterilization and preparation. It clearly describes the preparation of material of all kinds, indicates the instruments required for the various operations, details the preparation and care of the patient before and after operation, and the methods of anesthetization, describes and illustrates the position of the patient for different operations, and contains all other information a knowledge of which is necessary to produce the highest efficiency.

Progressive Medicine.—A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences, edited by Hobart Amory Hare, M.D., and H. R. N. Landin, M.D. September 1st, 1906. Lea Brothers & Co., Philadelphia and New York. $6 per annum.

The contributors to this, the 3rd volume, are Drs. Ewart, Gottheil, Norris and Spiller, names sufficient to guarantee the usual high level of the articles. If we might specify one of the many good things, we would allude to the superior resumé of the recent advances in the diagnosis of chest and heart diseases, well worth in itself the year's subscription. No other work in the English language covers the ground as well as Progressive Medicine—always complete, always terse, and ever welcome to every physician who keeps abreast of the times.

Selections.

The Nutrophiles in Babies Nourished Naturally and Artificially.—Esser (Muncher. Med. Wochensch).

Kurtz concluded (1) that the nutrophilic leucocytes with four or five nuclei fragments were increased for the first three or four days in babies who had been nourished by the breast; (2) that this relative number of nucleated nutrophiles was much decreased when mother's milk was suddenly changed to cow's milk; (3) that after a prolonged artificial feeding the blood picture approximated the normal adult blood; (4) that stomach diseases and atrophic conditions would cause a decrease of the number of nuclei fragmented cells and an increase in the mononucleated cells. Considering the multi-nucleated cells as the older and protecting cells of the organism, he thinks that perhaps these produce the antibodies in the blood. With their disappearance there would be in the blood a large amount of this protecting substance and with their reappearance the element of infection would be present. Contrary to this conclusion was the possibility that the many fragmented nucleated cells were the older forms of degeneration and were the first to be affected by processes of disintegration.—*Interstate Med. Jour.*

The Sedimentation of Sputum by Means of Hydrogen Peroxide.—Sachs-Muckle (Muench. Med. Wochenschr).

If hydrogen peroxide be added to a purulent sputum an active effervescence takes place during which all lumps and masses of pus and tissue are violently torn apart and the sputum converted into a more or less homogeneous mass. Upon being allowed to stand, the sputum separates into three layers; an upper one consisting of froth, a middle clean fluid layer and at the bottom a solid mass consisting of detritus and microorganisms. In this lower layer, bacteria of all sorts, especially tubercle bacilli, can be found very much more readily than in the original sputum. The addition of one part per thousand of bichloride to the peroxide of hydrogen makes possible a still further extension of the method. If this mixture be placed in a vessel by the side of the patient and the latter directed to expectorate into it, the entire twenty-four hours' amount of sputum may be collected without danger of infection. Whenever it is desired to examine the sputum, the disintegration and sedimentation will usually be found to have taken place and the material at the bottom of the vessel will be suitable for examination.—*Interstate Med. Jour.*

Treatment of Pulmonary Tuberculosis by Bier's Method of Passine Hyperemia.

Leo (*Berlin. klin. Woch.,*) strives to produce a hyperemia of the lungs by placing the patient on his back and elevating the head and legs. This position is to be retained four hours per day. The method has in the main been successful. In two of the thirty patients hemoptysis occurred; occasionally epistaxis was observed. In some patients dizziness and fulness of the head appeared. In the majority of the cases the posture was well borne. The usual treatment in pulmonary tuberculosis is not to be neglected.—*Interstate Med. Jour.*

Metabolism in Pancreatic Disease and the Effects of Opium and Pancreatic Extract.—(Zeitsch. f. experiment. Path. u. Therap).

It is well known that the pancreatic gland elaborates ferments that chemically alter proteids, fat and starches, and thus prepare them for assimilation, and that it also produces an internal secretion that is of the greatest importance for the normal combustion of sugar within the tissues. If the pancreas is removed experimentally, diabetes mellitus will follow and the food will be improperly digested, but if the excretory ducts only are ligated glycosuria is not the rule. On the other hand, an experimental diabetes can often be corrected if a small piece of pancreas be implanted under the skin, so that the organism gets the benefits of the internal secretion. If the pancreas is destroyed in man by pathological processes (tumor, infarct, atrophy), the results are the same: fats, starches, and carbohydrate will be poorly digested and the symptoms of diabetes will appear.

A case of carcinoma of the pancreas, presenting all the typical symptoms, was selected by Ernest Meyer, of the Universitats-Klinik, in Halle a. S., in order to determine experimentally the absorption of the different food products and to ascertain if the disturbances in metabolism and the excretion of sugar can be favorably influenced by internal medication, particularly by opium, since this undoubtedly reduces glycosuria, and by pankreon, a most effective tannin-pancreatin compound. The amount of food required by the patient was above normal and the quantity of feces voided was still larger. On the diet of meat, eggs, milk, rolls, and potatoes an analysis of the feces showed that only 34 to 38 per cent. proteids and 23 per cent. fat were absorbed, while on a diet of only milk, rolls, and butter, 41 per cent. of proteids and 38 per cent. of fat were assimilated. Neither

starch nor sugar could be detected in the feces, but by way of the urine, on the average, 90 gm. of glucose were lost daily. Pankreon was now administered in three daily doses of 1 gm. (15 grn.) for six succeeding days. The amount of proteid absorbed now reached 59 to 64 per cent.; that of fat 63 to 66 per cent.; while only 34 gm. of glucose were excreted daily with the urine, so that the patient was again in nitrogenous equilibrium. The number of calories utilized rose from 1,700 to 2,500, the stools lost their disagreeable odor and became more solid, and the general condition of the incurable patient was much improved. With opium (15 drops tinct. opii simpl. t. i. d.), 47 to 52 per cent. of the ingested proteids and 45 to 49 per cent. of the ingested fat were absorbed, and the amount of sugar excreted was also reduced, proving that opium has very much the same effect in pancreatic disease as pankreon, but to a less degree. It is probable that still better results will be obtained if both drugs are used together.—*The Post-Graduate.*

Cheese in Therapeutics.

M. Paul Gallois of Paris, entertains the theory that all forms of gastroentritis in infants originate in dyspepsia, which, he thinks, paves the way for bacterial infection. The dyspepsia he attributes to overfeeding, and particularly to the ingestion of too much liquid. Hence he prescribes what he calls a dry diet (*régime sec*) for children who have been weaned. He explains, in the *Bulletin médical* for September 1st, that it was in pursuance of this idea of restricting the amount of liquid allowed that he was led to treat nurslings by substituting for a certain number of the daily nursings meals prepared by mixing a coffeespoonful of Swiss cream cheese with a soupspoonful of milk and sweetening the mixture.

He realizes that cheese is of ill repute as an article of diet for children, and adds that on one occasion his proposal to use it drew a smile of astonishment from one of the women who were present. He gives numerous arguments, however, in favor of its employment. He says that, as we all know, it is very nutritious, being "the quintessence of milk," that the bacteria in which it abounds are not all pathogenic, that it contains ferments which promote digestion, and, indeed, that it is to some extent predigested milk. Whatever we may think of these arguments and of the *régime sec* theory, we must admit that M. Gallois has adduced some clinical evidence of good results having followed the use of cheese in the diarrhœal diseases of infants. One might well hesitate to give ordinary solid cheese

to babies, but some of the finer cream cheeses may probably be used cautiously with a certain amount of confidence.

Incidentally, M. Gallois tells us that he has employed with satisfaction a mixture of butter and cheese as a substitute for meat in the diet of persons suffering with Bright's disease. In such cases, we presume, a solid cheese might be quite as acceptable as cream cheese, and its use is no novelty. A mixture of butter and almost any good cheese is palatable and highly nutritious, and we should think it might be preferred by many patients to skimmed milk and some of the other substitutes for meat. Many kinds of cheese are constipating to certain individuals, but doubtless it is quite practicable to correct this action; indeed, it often abates if the use of cheese is persisted in. —*New York Medical Journal.*

SURGICAL HINTS.

In operations for uterine fibroids special attention should be given to the heart during anesthesia, owing to the frequent presence of organic cardiac disease in these cases.

The presence of phimosis in children is a common cause of erections, but if they occur in the absence of this condition it is well to bear in mind the possibility of their being due to gravel or vesical calculus.

When purgatives are required after laparotomies salines usually serve the purpose best, while calomel sometimes acts as an irritant and increases fecal obstruction by producing a spasmodic condition of the bowel.

The occurrence of epididymitis in the course of gonorrhea usually points to the involvement of the posterior urethra, prostate, or bladder, and it is a curious fact that the characteristic symptoms of disease of these parts begin to subside as soon as the epididymis is attacked.

While the pessary has been generally discarded by gynecologists for the treatment of many of the conditions in which it was formerly held in high esteem, it still serves an undoubted good purpose in cases of retrodeviations during the early months of pregnancy, where the support afforded by its use prevents many pressure disturbances by the uterus and facilitates the ascent of the organ.—*International Journal of Surgery.*

Acidum Picricum.

In a comprehensive monograph on picric acid and its therapeutic application, as hitherto practised in diseases of the skin and sexual organs, O. Meyer reports on the experience which has resulted from the application of the acid at the Strassburg Skin Hospital in acute, chronic, weeping, seborrhoic, and impetiginous eczema. It was employed for the treatment of eczema of the hands in the form of hot local baths containing 0.5—1% of picric acid, also as a 0.5—1% addition to ordinary zinc starch paste or to a mixture of zinc stearate and paraffinum liquidum, in exceptional cases also in conjunction with vaseline-lanoline ointments. Whilst Meyer admits that before instituting the picric acid treatment it is necessary to make sure that the digestion is sound and the kidneys intact, he does not, like some other writers, regard the picric acid ointments as liable to give rise to general symptoms of intoxication, since he was unable to instance a single case to support this view. On the other hand, the acid is in an eminent degree endowed with the power of stimulating the formation of epidermis, which has proved beneficial both in burns and in various forms of eczema. Higher expectations should, however, not be fostered in connection with the latter, since the acid fails when once a dry epidermised surface has formed. In this case it is necessary to have recourse to another treatment, say that involving the use of tar, etc. Picric acid was at its best in seborrhoic eczema and that of the hand, but met with the most obstinate resistance when applied to eczema of the leg, where picric acid paste, after inducing an improvement at first, gave rise to a follicular inflammation, which as a matter of fact may also occur after the use of other pastes and ointments containing no picric acid. Similar symptoms of irritation occurring in seborrhoic patients may in Meyer's opinion be traceable to a form of idiosyncrasy.

Picric acid has proved valuable in fresh cavities resulting from radical operations where the torpidity of the tissue was the cause of a very slow formation of epidermis. Bondy dabbed in these cases the granulating surface at intervals of two or three days with a 1:10 ethereal solution of picric acid without using a tampon and ensured a rapid growth of epidermis, excepting in those cases where suppurating tubes resisted the process of healing.—*Merck's Annual Reports.*

Stypticin.

Stypticin shines among the best modern remedies as one which is practically exempt from accusations relative to unpleasant secondary properties and which does not even in excessive doses

give rise to alarming symptoms. It cannot under these circumstances surprise that so valuable a hæmostatic, since its introduction ten years ago, figures now as an indispensable remedy. From the literature of the last year it may suffice to briefly review some comments.

Isenburg secured excellent results by the internal administration of stypticine in purely climacteric hæmorrhage, menorrhagia arising from defective involution after parturition or miscarriage, profuse menstrual bleeding, grave cases of hæmoptysis and hæmaturia. He employed doses up to 0.3 grm. (= 6 tablets) per day.

The excellent action of stypticin in uterine hæmorrhage is confirmed by Zoppeli, Boldt and Chase. Zoppeli employed it also with advantage prophylactically in uterine curetting as a means of preventing hæmorrhage. According to his experience it surpasses the older customary hæmostatics, such as secale cornutum, ergotin, gallic acid, hydrastinin hamamelis and adrenalin, since it is not so toxic as some of these and, in addition, endowed with anodyne properties so as to exercise a beneficial influence upon the pains which frequently accompany various forms of hæmorrhage, dysmenorrhœa, etc. Even prolonged use does not entail inconveniences. Zoppeli has even found its efficacy to rise under these circumstances, the hæmorrhage diminishing in duration and intensity.

In cases of hæmorrhage after miscarriage, where curretting appears inadvisable the latter may be averted by a combined use of stypticin and hydrastinin.

Chase gives the following formula for this purpose:

Rp.	Hydrastinin. hydrochlor. ..	0.06 grm.	(gr. 1)
	Stypticin	0.36 grm.	(gr. 5½)
	Syrupi rubi idæi	7.5 grm.	(gr. 125)
	Elixir. simpl. q. s. ad.	30.0 grm.	(oz. 1)

1 teaspoonful to be given every 2 or 3 hours.

The combination of stypticin and hydrastinin has the advantage that the properties of the two media are mutually complementary, the former being enduring, the latter prompt in action. Stypticin and hydrastinin may also be applied subcutaneously in case a prompt action should be desired.

The application of stypticin in dental surgery is commented on by Levy and Klein. It effectually stops bleeding and afterbleeding, when applied in a suitable manner to the bleeding part in the form of a powder, gauze or wadding. It may also be administered internally in cases where extraction of teeth are

found to regularly give rise to violent bleeding. In cases of this kind Klein prescribed 3 days before the operation in the morning and evening 0.05 grm. (gr. 5/6) stypticin and found this treatment to keep the hæmorrhage within bounds.—*Merck's Annual Reports.*

Artificial Nauheim Baths in Chronic Heart Disease.

P. K. Brown states that the cases particularly fitted for Nauheim treatment are those in which the heart muscle acts insufficiently either from dilatation, poor blood supply due to anemia, or arteriosclerosis with changes in the muscle, acute or chronic, tobacco poisoning, and moderate fatty changes. Twelve clinical histories are given. Concerning the use of resisted movements in connection with the baths, the author states that he does not consider them essential, and they are not in his view as lasting in their effects as is the bath. They are often very tiresome to the patient, and are in bad cases actually dangerous unless given by someone who fully understands their purpose and makes a careful study of each individual case. Brown prefers to give them an hour or two before the bath; but if this is not possible, it is better to wait some hours after the bath. As regards massage in connection with treatment, he has found it of advantage when the temperature of the water was below 90° in securing a prompt reaction from the sensation of cold which patients with sensitive skins frequently have as the result of cutaneous stimulation. It is necessary that the patient be placed in a warm room and have his extremities well rubbed if there be much discomfort from the sensation of cold. The author describes in full his experience in the preparation of the artificial Nauheim salts. In his judgment the use of these salts at home under careful supervision of the physician gives just as good results as at Nauheim, and the régime is far more convenient and agreeable to the patient.—*Boston Medical and Surgical Journal,* September 13, 1906.

It remained for a Missouri man to give to the world an effective way of getting rid of mosquitoes. He says: "Rub alum on your face and hands. When the mosquito takes a bite it puckers his buzzer so it can't sting. It sits down in a damp place, tries to dig the pucker loose, catches its death of cold, and dies of pneumonia.—*Catholic Mirror.*

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Original Communications.

THE RELATION OF THE PHYSICIAN TO HIS PREGNANT PATIENT.*

BY W. P. MANTON, M.D., DETROIT.

In his address on "The Future of the Medical Profession," delivered at the opening of the new buildings of the Harvard Medical School, President Eliot enlarges upon a subject which, if not new, has as yet failed to receive that attention from the profession at large which its importance demands.

"The ordinary physician," he says, "has for the last hundred years been almost exclusively a man devoted to the treatment of disease already developed in human bodies or of injuries already incurred." In the future his function will include not only these, but, entering a broader field, from his analysis of all the processes which accompany disease, and knowing their actual sequence, the physician will apply more and more largely the remedy—prevention.

It is a sad commentary on the art and science of Obstetrics that, while its literature deals so fully with the cure of existing disease and teaches with exactness the technique of operative procedures, it gives but scant consideration to the prophylaxis of, to a large extent, preventable disorders. That this is not the fault of investigators along these lines is evidenced by the voluminous writings on laboratory and bedside observations with which our journals are replete.

We are becoming fairly familiar with the processes accompanying the disorders incident to the child-bearing act, and

* Read before the Sixth Councillor District Medical Society, Flint, Michigan, November 7th, 1906.

know, to a large extent, their origin and results, but it is in the application of this knowledge that failure is conspicuously evident, and, neglecting the cause, too great trust is placed in ability to overcome results.

"If woman," writes Higginson, "really exists but as a child-bearing animal, let us say so frankly," and, he might have added, treat her with commensurate consideration. Certainly no breeder of fine stock would submit his animals to the same lack of care and attention as is ordinarily accorded to the pregnant woman.

Ignorance of physiologic and morbid processes being untenable as excuse for this neglect, we must seek elsewhere for an elucidating reason. And this, I believe, will be discovered in an incident which recently came under observation.

A patient, pregnant about the fifth month, was brought to one of our hospitals in a moribund condition. She was young and vigorous and, save some slight bladder irritation, had been well up to the morning of the day when convulsions set in. Dilatation of the os had begun, and at the hospital evacuation of the uterus was readily accomplished. The patient did not, however, regain consciousness, and died a few hours later in spite of the most energetic efforts to save her life. The urine of the patient had not been examined prior to her entrance at the hospital, and in conversation with her physician the remark was made that it still appeared necessary for the general practitioner to learn that the urine should be tested from the beginning of pregnancy, to which he replied, "Doctor, it does not *pay.*"

The case is a pathetic illustration of the present status of obstetric practice. Here was a young woman of the poorer class, in robust health, whose life was sacrificed on account of her inability to adequately remunerate the physician for the time and skill which he might expend in caring for and directing her during the trying period of gestation. Unfortunately the case is not exceptional, nor is the physician to be held wholly blameworthy for following a course which is almost universally practised among patients in all stations of life.

In these days of vigorous commercialism the physician is apt to forget that "the practice of medicine is an art, not a trade; a calling, not a business;" and that he has taken upon himself a vow to succor the sick and afflicted and to bestow the gifts of his knowledge freely and with open hand. It often happens that the practitioner is engaged for a confinement and, perhaps, does not see his patient again until the pains of labor have set

in. What of the interval, and why the neglected opportunity, except that it "does not pay."

It certainly is not incumbent on the physician to accept the responsibilities of any case unless he sees fit to do so; but, having once taken charge, the question of moral responsibility is one which cannot be ignored, even if after the expenditure of time and skill the reward may be no larger than duty well done.

Old Dr. James Jackson, in his "Letters to a Young Physician," says, "You are bound as by an oath, though you have never held up your hand before man, to use your best judgment in the treatment of those who are committed to your care," and while "a desire for profit and reputation might be enough to prompt him (the physician) to do all this, it would also be good policy. But he will not do it with a full certainty of success if he be not influenced by still higher motives, by a true love of science and humanity." With the average physician the quality policy is one which is generally well cultivated, and yet in the matter of the care of pregnant women a surprising shortsightedness is often manifested, so that, the unexpected happening, the practitioner is taken off his guard, to his own and the patient's detriment.

While pregnancy is a physiological process through which the great majority of women pass without untoward manifestations, the condition, as remarked by Robert Barnes, is the great test of bodily soundness, and the effects of the growing ovum on the maternal organism are such that the demarcation between health and disease is often very shadowy, trivial causes not infrequently serving to turn the balance from well-being to serious or even fatal consequences. It is to the anticipation and prevention of these morbid showings that the aim and purpose of the physician should be directed, no matter what the cost in personal discomfort or the possibilities of future remuneration. To accomplish this it is of the utmost importance that the practitioner keep in touch with his patient from the moment she comes under observation to the completion of puerpery. This is not only good policy, but a paying investment, for by so doing the physician enlarges his knowledge, increases his proficiency, and puts himself on the best footing with his client, but he also fortifies himself against the unexpected, and insures against the possibilities of mortification and chagrin on the sudden development of unforeseen contingencies.

Moreover, if we must accept the sordid motive for well doing, every woman, however poor or degraded, appreciates relief from suffering and escape from serious consequence, and, whether

she can pay in the coin of the realm or not, is more than ready to lavish her good-will, extoll the physician's kindness and dwell upon his skill.

There is no one of experience but can number among his most remunerative patrons one or more who have come under his care through such humble means.

Of the scientific side of the question much might be said. In the heat and burden of the day, the rush of life and the competition of the times, too little opportunity is given for the careful study and observations of those conditions with which we are in common contact. Increasing familiarity and the drudgery of practice too often appear to dull the senses as to the scientific truths which every one of us might cull from daily experience, and thus much that is worthy and much that would be helpful to ourselves and to the world is lost through slothfulness, indifference or haste. The apparently trifling observations of Oliver Wendell Holmes and Semmelweiss, regarding the connection between uncleanliness and puerperal morbility led to further advancement and made possible the wonderful achievements in obstetrics and surgery of the present day.

The maintenance of health of the pregnant woman is of the greatest importance, and she should be protected from the multitude of dangers which inevitably threaten her condition, and of which she is for the most part ignorant. In first pregnancies especially, the woman is uninformed by experience what to expect or what to do under the new and changed conditions. Many girls enter the married state in almost total ignorance of the sexual relations, and the advent of pregnancy is to them an unexpected and unexplained mystery. What can such a woman know of the dangers which may threaten from indiscretions in diet, from inadequate bodily protection, from excessive or unwonted exercise, or from the thousand and one daily indulgences and habits which she has hitherto practised without thought or evil consequence? And is it not eminently within the province and duty of the physician to guide her in the manner of living, to instruct regarding personal hygiene, to alleviate as far as possible the annoyances and minor ailments to which she is liable, and to direct her in the matter of even the smallest detail preparatory to the final event—labor?

Should she not also be warned that, while indiscretions, either from ignorance or wilfulness, may not perhaps seriously affect her own physical health, they may later become manifested in her child?

How many times want of forethought leads to abortion or

premature labor or the begetting of weak and sickly offspring whose insufficient hold on life renders post-natal existence impossible, or so handicaps the new-born with constitutional defects that it is unable successfully to struggle against external conditions and therefore perishes from the first extra strain imposed by sickness or disease.

In order that both mother and child may receive that attention which is their due, every gravid woman should be under the care and direction of a competent physician during the whole nine months of pregnancy. She should be told what to eat and wear, how to rest and exercise, and what attention should be given to bodily functions and cleanliness, in order that her own well-being may be maintained and the health of her future offspring established. Every physician is aware that, while most of the disturbances of pregnancy are but temporary and insignificant, depending either on reflex action or the pressure of the enlarging womb upon surrounding organs and parts, the entire relief of which may be impossible as long as the cause remains, yet that there are other symptoms of most serious import which arise insidiously,—the threatening evils of which may be anticipated and forestalled.

The importance of examining every woman during the later months of pregnancy cannot be exaggerated. A knowledge of the pelvic contents, the presence or absence of adventitious growths, and the approximate size of the bony canal, forewarns the physician as to possible difficulties, or the impossibility of labor, and, by a careful study of each case, enables him to determine the necessity for intervention either before or at the time of delivery. Pelvimetry is easily and quickly accomplished, and while it may furnish only relative information regarding the size of the pelvic canal, it serves to make the knowledge of the case more certain, and in that way fulfils its purpose.

In a recent case where there were no symptoms, examination revealed the presence of a dermoid cyst firmly adherent and so blocking the pelvic brim as to render engagement of the child's head impossible. The woman was quickly and sucessfully delivered by Cæsarean section, and the tumor removed, with happy outcome to both mother and child.

"Foreknowledge absolute," as Milton calls it, places the physician at once at an advantage with himself, the patient and the possibilities to come.

On the other hand, the practitioner will do well to remember

and avoid the common error of attributing every possible symptom to the gravid uterus, and seek by careful investigation to differentiate intercurrent affections from purely reflex phenomena.

And there is the other side of the question to be considered, —the child.

It has been said that the integrity of a nation depends upon the physical as well as the mental qualities of its individual constituents. The function of the physician includes not only the treatment of disease, but the teaching of the people the ways of right living and the prevention of morbid developments.

If the expectant mother could but be instructed from the beginning in those things which she is entitled to know, guided during the function of gestation, and protected from the threatening sorrows and evils which ambush her existence, it would not take many generations to produce a race of men and women who in both "intellectual supremacy and national strength" would rival the ancient Greeks.

These are vital questions demanding serious thought, and if the practitioner will but give them the consideration they deserve, the beneficent results will be manifested in a better profession, a safer gestation to all women, and an improved and strengthened posterity.

32 Adams Avenue, West.

EVOLUTION OF MEDICINE IN ONTARIO.*

H. B. ANDERSON, M.D., L.R.C.P. (Lond.), M.R.C.S. (Eng.)
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In assuming the duties of President of the Toronto Clinical Society for the coming year, I wish to express to you my deep appreciation of the honor. To be elected to the chief office in a society which represents so much of the medical life of a great city is something of which any man might be proud. Limited though it is in numbers, within the membership of this Society are found many of those whose eminence as clinicians has gained for the medical profession of Toronto the place it now holds in the confidence and esteem of the community, and whose ability as teachers and wisdom as counsellors has contributed largely to mould the medical thought and direct the policy of our profession during one of the most important periods in its history. While appreciating the honor, equally do I realize the responsibilities which the position involves, and how much one lacks the qualifications to properly discharge them. I shall continue, however, to rely on that personal kindness and friendship which has been one of the most valued assets of my professional life, and shall ask of you and my associates in office the same sympathetic and loyal support so freely accorded my predecessors in the chair. During my tenure of office I can assure you that my best efforts will be devoted to maintaining the high character which has distinguished the work of this Society since its organization, and which has made the meetings so valuable to us all.

It is not my intention to occupy much of your time this evening with any introductory remarks. Not that the present is an inopportune time, nor that a Clinical Society is an unsuitable place to discuss many matters of importance to the profession of our country,—matters which the rapid evolution of events will force upon our consideration in the near future, and in the solution of which a society of the standing and influence of this must play a considerable part.

The epoch making nature of the events which have been taking place around us since the organization of the Clinical Society in 1894 must have occurred to all of us, not in the medical profession alone, but in every line of intellectual, industrial, commercial and political activity in our country. After long years of waiting and hope deferred, we are privi-

*Presidental Address, Toronto Clinical Society, Oct. 10th, 1906.

leged to live at the beginning of the century which by common opinion belongs to Canada—an era which is to witness the transformation of an obscure colony into one of the great nations of the world. Our illimitable natural resources and opportunities are attracting attention from all quarters of the globe. Ever alert, financial, commercial and industrial interests have quickly grasped the situation, so that on every side we see an extension of enterprise, a broadening of foundations and a perfecting of organization to meet rapidly-growing requirements and to take advantage of the golden opportunities which the future has in store.

It therefore appears a fitting time to glance at our own profession,—its past history, present condition and future prospects. As an index to our hopes it is instructive to recall the transformation which a century has produced in the country which is so frequently compared to our own. At the beginning of the last century the United States had a population of about 4,000,000. The first medical school in that country, now the Medical Faculty of the University of Pennsylvania, had been established only thirty-five years; the Medical Department of King's College, N.Y., now Columbia, thirty-three years; Harvard, seventeen years, and the Medico-Chirugical Faculty of Maryland, eleven years,—all struggling institutions whose influence at that time had produced no effect on the medical world at large. In the whole country there were but two general hospitals, one medical journal (*The Medical Repository,* New York, 1797); and the only medical libraries were one each in connection with the hospitals of New York and Philadelphia. For the education of medical students the old apprentice system was still largely in vogue.

Reflection on the position of the profession in our own country, our medical laws and institutions, at a corresponding period in national development, is indeed reassuring and must impress us with a deep sense of the gratitude we owe those worthy pioneers, the military surgeons, who at the beginning of the last century were laying the foundations of the profession in this province. We of the present generation are reaping the advantages of the high ideals by which they were actuated, and of the strenuous efforts they put forth to establish and maintain in a struggling colony the honorable character and traditions of the profession of the motherland. From the view-point of the present it would be not only instructive, but inspiring, to look back and consider for a moment what manner of men they were, these pioneer surgeons,

the difficulties they encountered, what they accomplished, and to trace their influence on the evolution of the profession in the province; but the time at my disposal will permit of only a brief reference to them. They were men socially of high rank, and certainly well abreast with the advancement of medicine at that time, thoroughly trained in the schools of London, Edinburgh and Dublin at a period made brilliant by the labors of the Hunters, Edward Jenner, Percival Pott, Benjamin Bell, John Bell and other great teachers. They possessed a wide experience, not only of medicine, but of men and affairs, gained by active service during the wars of that period. The influence of these early military surgeons had been indelibly stamped on the medical profession of this province, and has been an important factor in giving character to our clinical teaching and practice. To their efforts we are indebted for the first efficient legislative control of the practice of medicine, obtained by the Medical Act of 1818 under which the Medical Board of Upper Canada was created. From that time until its last meeting in 1865, before the formation of the College of Physicians and Surgeons of Ontario, this Medical Board guarded the entrance to the profession, and practically controlled the medical affairs of the province. Up until 1830 the influence of the military element in relation to the medical profession was practically supreme and undisputed. In the very nature of things they were in close touch and sympathy, and evidently possessed the confidence of the Governors and the Executive, which, in the period preceding the MacKenzie Rebellion, administered as they deemed best the affairs of the province. This intimate association of the founders of our profession with the all-powerful Family Compact was a potent factor in securing the sympathetic co-operation and often active assistance of the early Governors and other branches of the Administration, in establishing the profession on a proper basis. In this connection it is pleasant to note, in parenthesis, that the profession in the early days had a warm friend and able advocate in the Rev. Dr. Strachan. In all ages the true followers of Aesculapius have had to deplore the ease with which too frequently clerical support has been enlisted on behalf of their enemies, the rapacious irregulars and quacks who fatten on the ignorance of the laity in matters medical, but the prevalent quackery of the days prior to the Medical Board got no quarter from this strenuous ecclesiastic.

It was through the efforts of the military surgeons that the

General Hospital was established in 1819, at a time when the population of Toronto was less than 1,200. The outstanding figure among them, who for thirty-five years was chairman of the Medical Board and the recognized leader of the profession, was Dr. Christopher Widmer. Resigning his commission in the service and undertaking civil practice in York in 1815, at a time when the medical needs of the population could no longer be properly cared for by the surgeons attached to the garrison, for many years he had practically a monopoly of the practice of the town, and until his death in 1858 his name appears in connection with every movement for advancing the welfare of the profession. When Dr. Widmer began practice there were only about forty regularly qualified doctors in the province. He was one of the founders and first President of the Medico-Chirurgical Society of Upper Canada, established in 1833. A perusal of the minutes of the Medical Board during his thirty-five years as President indicates his broad grasp of medical politics, and illustrates with what constancy, courage and military precision he directed its proceedings. In speaking of him, Dr. Osler says: "One picture on the canvas of those early days lingers in the memory, illustrating all the most attractive features of a race which has done much to make this country what it is to-day. Widmer was the type of the dignified old army surgeon, scrupulously punctilious, and in every detail regardful of the proprieties of life." Dr. Christopher Widmer has therefore justly been called the Father of Medicine in Ontario. He and his associates on the Medical Board were early and vigorous advocates of the necessity for providing for the medical education of those desiring to enter the profession in the province, and they were largely instrumental in securing the establishment of a medical department in King's College when that institution began operations in 1844. Tories by instinct and association, they had an antipathy to everything American, born, no doubt, of the Revolutionary War, perpetuated by the influence of the United Empire Loyalists on the politics of Upper Canada, and intensified by the experiences and memories of the War of 1812. This ever-present fear of American influence was one of the chief reasons continually urged on the Government of the importance of establishing a medical school in Upper Canada, so that our students might be educated at home, without their loyalty being exposed to the possibly too democratic atmosphere of New York and Philadelphia.

Between 1830 and 1840, however, with the gradually

increasing population, another element became prominent in the medical as well as the political affairs of the province. They were not of the military type, nor were they the favorites of the Family Compact; consequently they soon came into opposition alike with the Government and the dominant medical faction. Much dissatisfaction arose from the composition of the Medical Board, the control of the examinations for license, the administration of the General Hospital and other public medical institutions. This discontent culminated in the calling of a public meeting in 1836, at which these grievances were ventilated and resolutions adopted for transmission to the Government, embodying many suggestions for reform. Resolution No. 4 reads as follows: "That it is the opinion of this meeting that over the Hospital of this city a veil of obscurity impends which it is highly advantageous to have removed. No appointed days await the attendance of medical men in connection with the institution; no published reports inform the public of the number of those who have been restored to their friends, cured of their infirmities; the passing bier alone affords a melancholy proof that the institution still exists in active operation." The clouds of discontent were evidently deepening over the medical as well as the political institutions of the province. The struggle for responsible government was being bitterly prosecuted, and in the movement no class of the community took a more prominent part than a section of the medical profession, of whom Drs. John Rolph, William Warren Baldwin, Thomas David Morrison and Charles Duncombe were the leading spirits. It therefore appears how inevitably a breach in the medical profession occurred between the adherents and intimates of the administration and those who espoused the cause of reform. Of the latter Dr. Rolph was for many years such a conspicuous figure in the medical affairs of the province that to us his career is of unusual interest. He was a student of Guy's and St. Thomas's Hospitals, and a pupil of Sir Astley Cooper's; at the same time he studied law and became a member of the Inner Temple. He first devoted himself to the practice of law, being called to the Bar of Upper Canada in 1821. By his great intellectual endowment and eloquence he soon acquired a large practice and became one of the leaders of the profession. Early at variance with the judiciary owing to his political views, in 1828, dissatisfied with a decision of Justice Sherwood, he with Dr. Wm. Warren Baldwin (who also practised dual professions), threw off his gown, and left the court. He thenceforward devoted himself to poli-

tics and medicine, passing the examination of the Medical Board in 1829. He was then nearly forty years old, and his subsequent career is a brilliant example of a man's capabilities in medicine after that age. He soon attained a position in the medical profession as eminent as the one he had forsaken in law. He was appointed a member of the Medical Board in 1832, and for some years was an active advocate of a medical department in the projected King's College. Of the part he played in the struggle for responsible government, his association with the Rebellion, and his six years' exile in Rochester, I shall say nothing. Returning to Toronto in 1843, out of touch and sympathy with the newly created medical faculty of King's College, he established a private school in rivalry with that institution, which afterwards became known as the Toronto School of Medicine. These details are given to show that, in the beginning, political disagreement at that period was responsible for producing school divisions and rivalries, which affected the profession of the province long years after the original cause was forgotten.

In 1850, after the ascendency of the Reform party, King's College passed from under the control of the Anglican Church and became a secular institution under the name of the University of Toronto. Through the efforts of the Rev. Bishop Strachan, Trinity University was then established in connection with the Anglican Church, and the Upper Canada School of Medicine was constituted its Medical Faculty, with Drs. Hodder, Bovell, Bethune, Hallowell and Melville as lecturers. This school, however, lasted only a few years. Owing, it is said, to the influence of Dr. Rolph in the Reform Government of Sir Francis Hincks, the Medical Faculty of the University of Toronto was disestablished in 1853.

In 1856 a disagreement arose between Dr. Rolph and his colleagues, Drs. Aikins, Workman, Langstaff, H. H. Wright, of the Toronto School of Medicine, a separation occurred, and after some litigation Dr. Rolph established a school in Yorkville, which became the Medical Faculty of Victoria University. As such, due largely to his wonderful powers as a teacher, this school had a prosperous career until Dr. Rolph's death in 1870.

The resuscitation of the old Trinity School shortly after this time, by Drs. Geikie, Hodder and others, the reorganization of the University of Toronto in 1887 with the Toronto School of Medicine as its Medical Faculty, with the subsequent events leading up to the amalgamation of Trinity in

1903, are matters so familiar to all as to require no reference to them.

Kingston was early an important centre, medically speaking. The Kingston General Hospital was completed in 1835, with a capacity of 120 beds, Dr. James Sampson being its first physician. The Medical Faculty of Queen's College, Kingston, was organized in 1854 chiefly through the exertions of Dr. J. R. Dickson and Dr. Horatio Yates, with the able support of the late Sir John A. Macdonald.

We are thus able to trace the formation of the various medical schools in Ontario between 1843 and 1856.

Of Dr. Rolph, it is difficult even yet to estimate the value of the services he rendered the profession in this province. He represented a strong independent sentiment which won many adherents. He apparently commanded the admiration and affection of his friends as much as he aroused the bitterness of his enemies, but all had to respect his ability. An unprejudiced judgment must acknowledge him as a great teacher whose view of medical affairs was at times biased by his strong political convictions. Dent says of his: "He possessed talents which under favorable circumstances would have made him a marked man in either political or public life in any country. Chief among his qualifications may be mentioned a comprehensive, subtle intellect, high scholastic and professional attainment, a style of eloquence at once ornate and logical, a noble and handsome countenance, a voice of silvery sweetness and great power of modulation, and an address at once impressive, dignified and ingratiating."

For us of the present day, forgetting the differences of the past and the causes which produced them, we cannot look back on the history of the profession in this province without a feeling of admiration for the ability, courage and foresight of those who labored so earnestly to establish its foundations on a basis which enables us to begin the century free from the difficulties with which they had to contend. The founders of our profession were men of whom we may well be proud, not alone for their achievements in medicine, but for the important part they played in the social and political development of the province. Widmer, Rolph, Baldwin, Rovell, Hodder, Workman, King, Gwynne, Bethune, and, later, Aikins, Ross, Fulton and Graham are representatives of a group of men who must always command our respectful admiration and regard. A few of the same type still remain

with us. Some have retired from active work, others still in the harness distinguish their calling. These doctors of the old school furnish many examples of all that is implied in the best sense of the term, gentleman—high in ideals, scrupulous in honor, dignified in bearing, broad in culture, and courageous in their adherence to principle. In this age of material prosperity, and lacking much of the environment which developed their characters, it will be no easy task for their successors to maintain the standards they set as citizens as well as physicians.

In the evolution of our system of medical education, the traditions and methods of the London schools, of which most of the early members of the profession were graduates, exerted the greatest influence. The schools of Edinburgh, Glasgow and Dublin furnished many able representatives, but on the whole they played a secondary role—in fact until 1839 their graduates were not recognized by the Medical Board on an equality with those of the London schools—a cause of much dissatisfaction in the early days of the province.

It is interesting to note here the causes which have helped to determine certain differences which have characterized the educational and clinical methods of the American profession as compared with our own. The important influence of the military element has already been alluded to. Another potent factor arose from the estrangement between the United States and the mother country following the Revolution, on account of which American students went to Paris instead of to London. There, at the beginning of the last century, they came under the influence of the great teachers who laid the foundations of modern clinical medicine—Bichat, Laennec, Corvisart, Louis and others. The scientific and clinical awakening which began in France did not reach Great Britain until about the thirties, at the time of John Cheyne, Graves, Stokes, Bright, Addison and Latham, all of whom came under its influence. Through their students it extended to Canada between 1830 and 1840. The French school maintained its position until the time of Trosseau (1866), when the German influence began to dominate medical thought and progress. Vienna and Berlin then became the centres of attraction for American students. The American profession then passed under the dominating influence of Virchow and his followers, where they have remained until the present time. In contrast to ourselves, during the greater part of the past century, French and German methods have been much more powerful than British in mould-

ing the medical thought of the American profession. That we have been affected by French and German scientific methods, especially in later years through our close association with Johns Hopkins, goes without saying, but they have been modified by passage through English channels. The majority of our students still go to London rather than the Continent. Whether this has been a misfortune or not is a debatable question. If we missed the direct quickening influence of the scientific awakening of the French and German schools, we have avoided the therapeutic nihilism which followed in its wake. If our medical horizon has thereby been narrowed, if we have remained too much under the thraldom of authority, having accomplished little in the way of original investigations, we have avoided the tendency which for a time made the study of medicine an accumulation of dry scientific facts, obtained by the observation and research into the phenomena of disease as exhibited by plants, animals and man in the aggregate, rather than of an art which has for its main purpose the prevention or relief of pain and suffering as it affects the individual. Moreover, what Osler says of the American profession applies equally to our own, "Justice compels us to acknowledge that while winning an empire from the backwoods, the people of this land had more urgent needs than laboratories of research." Medicine with us, as with the English-speaking people in general, has been essentially utilitarian and practical, exalting the art rather than the science. "Sydenham, not Lineacre or Harvey, is the model English physician in whom was concentrated all those practical instincts upon which we lay much stress in the Anglo-Saxon character (Osler)." As the result of this practical trend our race may lay claim to most of the great discoveries which have lessened the suffering of mankind. Sydenham introduced the treatment of malaria by quinine, Jenner discovered vaccination, Simpson and Morton general anæsthesia, and Lister the use of antiseptics in surgery.

There is apparently at the present time a movement to pursue scientific work along lines of more immediate value to the clinician, as exemplified by the revival of interest in the study of therapeutics and the brilliant researches of Sir A. E. Wright. This closer association of the science with the art of medicine will more strongly appeal to men of our race. The maxim of Sir Astley Cooper still reflects the attitude of the majority of our profession, "Profound erudition is good for a man of means and practical knowledge for the physician and surgeon."

The outlook in all branches of medicine was never so bright as at the present time, and in the progress that is bound to take place during the 20th century, no country is more favorably circumstanced than our own for playing an important part. That Canadians are possessed of the intellectual capacity, the energy and the zeal, has been amply demonstrated by what our countrymen have already accomplished, and it should be a source of no small degree of pride to a country so young, that Dr. William Osler, a fellow citizen, should be the greatest living exponent of internal medicine.

As for Toronto, the most favorably located city on the continent, medically speaking, with a great university, one of the largest medical schools in the world, with the assurance in the near future of the best hospital facilities and abundance of clinical material, with a medical profession unsurpassed in the average of attainment, and supported by a country of unlimited resources, if we avail ourselves of the opportunities presented, and fulfil our stewardship to posterity as faithfully as the Fathers of Medicine in the province did for us, we may indulge the most sanguine hopes of its future as a centre of medical activity.

THE TREATMENT OF DIFFUSE PURULENT PERITONITIS*

Results in Sixty-two Operations in which Diffuse Purulent Peritonitis was Found.

By James F. W. Ross, M.D., C.M.
Professor of Gynæcology, University of Toronto.

Case-book No.	Pathological Condition	Result
38a Mrs. P. (Dr. Carveth) ..	Gonorrheal	Died
52 Garrett.....	Sepsis from Miscarriage	"
66 London.....	Sepsis from Extra-uterine Pregnancy.....	"
70 Moss	Sepsis from Extra-uterine Pregnancy.....	Recovered
102 White.....	Ulcer Duodenum ; perforation ; starvation 3 weeks after.....	Died
103 Urquhart...	Gonorrheal Peritonitis.....	Recovered
112 Medway....	Perforated Appendix	Died
115 Hitchman ..	Ruptured Pus Tube.....	"
121 Todd	Perforated Appendix	"
147 Middleton ..	Perforated Appendix.....	"
166 Barnes	Perforated Ulcer Duodenum	Recovered
194 Ditner	Perforated Appendix.....	Died
214 Farnen.....	Perforated Appendix	"
265 Stedman....	Ruptured Pus Tube.....	"
267 Holman	Sepsis Following Labor	"
277 McFadden..	Attempted Abortion	"
286 Maddison ..	Perforated Appendix.....	"
373 McCully....	Gangrene of Intestine.....	"
374 G—e.....	Following Dilatation of Uterus.....	"
376 Yelland.....	Perforated Appendix.....	"
496 Roblin	Perforated Appendix	"
497 Northcote ..	Ruptured Pus Tube.....	"
595 Forfar.....	Perforated Appendix.....	"
602 Hopkins....	Perforated Appendix	"
632 Dunn.....	Perforated Appendix	"
649 Cane.....	Gangrene of Intestine.....	"
680 Hall.....	Perforated Caecum	"
697 Mills.....	Perforated Appendix	"
713 Devitt	" "	"
738 Johns.....	" "	Recovered
762 Dunnington	" "	Died
827 Adams	" "	Recovered
874 Barth	" "	"
912 Farar	" "	Died
1021 Holdcroft ..	" "	Recovered
1032 Tustin.....	" "	"
1042 Cowan	Perforated Caecum	"
1033 Magwood...	Perforated Appendix.....	Died
1051 Hobbs	" "	Recovered
1051½ Hopkins ..	" "	"
1126 Cockburn...	" "	"
1161 May	Attempted Abortion.....	Died

* Read before the Clinical Society, Toronto, October, 1906.

Case-book No.	Pathological Condition	Result
1179 Eager	Perforated Appendix	Recovered
1191 Wilson	" "	"
1210 B—s	" "	Died
1230 Meservey	" "	"
1261 Illing	" "	Recovered
1266 Forrester	" "	"
1267 Finkle	" "	Died
1280 Coste	" "	"
1293 Sweetman	" "	"
1317 Buck	" "	Recovered
1322 Trewin	" "	Died
1369 Chesnut	" "	Recovered
1409 Rowell	Ruptured Pus Tube	"
1422 Thomas	Perforated Appendix	"
1435 McCullough	Perforated Appendix	"
1443 Thompson	Ruptured Pus Tube	"
1464 Hutcheson	Perforated Appendix	"
1465 Alexander	Perforated Gastric Ulcer	Died 1 hour later
1480 Jones	Perforated Appendix	Recovered
1501 Hearn	Perforated Appendix	"

It should be distinctly understood that the subject under discussion is diffuse purulent peritonitis, an inflammation that is general, extending over the whole peritoneal cavity, so that the pouches behind the liver and spleen, pouch in the loin, and the pelvic pouch, are all found filled with sero-pus.

Having made recently, for the discussion of this subject, careful examination of the results in sixty-two operations, I am able to give you some deductions:

The cases were as follows:

	Recovered	Died
Perforation of Appendix	19	22
Perforation of Caecum	1	1
Gangrene of Intestine (Internal Strangulation)		2
Perforation of Duodenal Ulcer	1	1
Perforation of Gastric Ulcer		1
Following Labor		1
Following Miscarriage		1
Attempted Abortion		2
Sepsis from Ruptured Ectopic Gestation	1	1
Gonorrhoel	1	1
Ruptured Pyosalpinx	2	3
Following Dilatation of Virgin Uterus		1
	25	37

In discussing this very interesting subject I would be ashamed to present such an appalling record were it not for the redeeming feature shown in the very gratifying results of the last thirty cases.

In the first series of thirty cases there were twenty-six deaths and four recoveries; in the last series of thirty cases there were ten deaths and twenty recoveries. Of the last eleven cases there have been nine recoveries; one of the deaths in this number having been a foregone conclusion before operation was undertaken at the patient's urgent request. The striking difference is due to two factors: First, to improved technique, and second, to earlier interference.

1. The early cases were washed out with gallons of water; "salt solution was not used at this time." I found that with the intestines in the abdomen much rubbing of the viscera was necessary, and this, no doubt, is a mistake. The endothelial cells should not be displaced; the protecting layers of lymph should be left in situ: these layers of lymph are placed in position as nature's guard to prevent rapid absorption through the lymphatics.

Some say that they wash only in cases in which stomach contents or intestinal contents have escaped. Why a case should be differently treated when tubal contents or appendiceal contents have been discharged into the abdominal cavity, I fail to understand. Until different vaccines have been arranged, with which the resisting power of the blood can be raised above the normal, and a condition of immunity produced, we must continue along the old lines of treatment; but we should endeavor to improve these as greatly as possible. Up to the present time I know of no better than (first) gentle, rapid evisceration through a large incision, with closure of the site of the original infection, thorough washing of the abdomen and its contents, and a closure with as much saline solution as the cavity will keep. Secondly, subcutaneous saline injections, as well as large rectal enematas, frequently or continuously administered. Thirdly, the administration of morphine in large doses; and, fourthly, the adoption of a posture that is known to benefit the patient.

It will be noticed that during operation it is difficult to keep the intestines from escaping, and why not let them escape, so long as they are kept warm and not rubbed? The lymph cannot be removed by a stream of water. If two of the inflamed intestines be separated from one another, lymph will be found adhering to each, and their separation does not remove the lymph from either of them. It would be interesting to ascertain the presence or absence of germs in this protecting lymph. If the intestines are sponged, or rubbed with towels, there is a danger that the lymph may be removed, and the endothelial

cells may be interfered with. I use no sponges in these cases; after the abdominal cavity has been closed, the fluid remaining becomes sterile. There is a condition frequently met with, and particularly in the pelvis, formerly called cystic peritonitis. This is nothing more than the condition left after a severe attack of peritonitis, where recovery takes place without operation; fluid is poured out, the lymphatic stomata are closed, and the fluid thus remains encysted. It will remain in this condition for years, and is undoubtedly sterile, as can be demonstrated at a subsequent operation.

At one of the meetings of the American Association of Obstetricians and Gynecologists, Dr. Howitt, of Guelph, read a paper, and there advocated evisceration for the purpose of locating any obscure intestinal obstruction. He stated that this was not accompanied by shock so long as the intestines were kept bathed with warm saline solution, and were not allowed to become chilled. It is difficult to keep them from escaping, and it is certainly impossible to wash as thoroughly when they are below the abdominal parietes as when they have been allowed to escape. Pockets that would otherwise evade the cleansing stream are by means of evisceration broken up and cleansed. Two streams of warm saline solution can be used; the one attached to a medium-sized Tait's Ovariotomy Trocar for internal use, and the other to a form of spraying nozzle for external use, that will distribute the fluid evenly and without too much force. The intra-abdominal stream should be made to cleanse the post splenic, post hepatic, the two iliac and the pelvic pouches. One need not consider the condition of the pulse under the circumstances; it is generally rapid, but the washing should be carried on until the operator is thoroughly satisfied that the viscera have been cleansed, that the abdominal cavity has been cleansed, and then the viscera are returned; the abdomen is left full of saline solution, and the wound is closed without drainage. I use no posture for the patient and no drain for the peritoneal cavity. I long since concluded that drainage under such circumstances did not drain for longer than about thirty-six hours; that a very small quantity of fluid, comparatively speaking, was removed by drainage; that there was an added element of danger owing to the fact that this large serous sack was left open to the danger of added sepsis from without. In one case I drained from each loin; the patient recovered, although there was scarcely any discharge from either the central incision in front, from the cul-de-sac of Douglas, or from the wounds in the loin.

I have not drained since, except in the case of 1,465, when the patient was practically dying from the effects of the hydrochloric acid that had been escaping from a large perforation in the stomach for hours before I saw him, and the operation was only undertaken at his request. Even in the case, No. 1,443 (ruptured pus tube), no drainage of any kind was used and the wounds were completely closed. Very soon after a drainage tube is placed, adhesions take place, the main peritoneal sac is shut off, and we are accomplishing nothing, except the possible contamination of a small quantity of fluid at the end of a small pouch. Drainage should be resorted to if we are unable to close off the original source of infection, but if that has once been accomplished no drains should be left and the wounds should be closed. Such wounds often begin to open by an ulceration of the sutures and a gaping of the skin; they may open even down to the intestines themselves, and when they do there is but little drainage of fluid; the peritoneal covering of the bowel looks dryish and red. This reopening of the wound shows the virulence of the poison that has been washed from below over the raw surface.

I am satisfied that the salt has a very beneficial effect. What I endeavor to do is to put the intestines, after they have been thoroughly washed, into a weak pickle. At the same time an effort should be made to load the blood with salt solution; this can be accomplished with submammary or subcutaneous normal saline, and of late it seems to have become fashionable to use the rectum and colon as a vehicle for carrying this material. I tried, with the assistance of others, intravenous injections of saline solution, but after one or two sudden deaths occurred we discarded this method. The blood and urine should be tested to determine whether there are any definite changes in the solid constituents. We have not had this done, as we have not a physiological chemist connected with our hospitals. The submammary injections should be carefully administered so as to prevent any necrosis of tissue; every precaution should be used to prevent sepsis after these injections. On certain occasions we have left the needles *in situ* with a clamp placed on the rubber tubing beyond the Y, so that the nurse could renew the solution from time to time as it disappeared from under the breasts into the circulation.

2. Earlier interference. Diffuse purulent peritonitis is now recognized more readily than it was a few years ago, and as a consequence the surgeon is called earlier, and owing to the education of the public, is allowed to do what is necessary

without delay. Formerly people said, "Wait till to-morrow." Now they say, "Why not attend to this at once?" We hope that the time may arrive when there will be very few cases of diffuse purulent peritonitis, particularly from perforation of the appendix. However, such cases will be met with from time to time, and must be treated accordingly. When once the patient has become greatly distended, and there are signs of impending early dissolution, it is not wise to operate. We must see these patients before this period is reached.

From perforation of the appendix, in my list, twenty-two died, nineteen recovered only after a terrible struggle, and every one of these might have been saved by early operation. And, then, in this list those cases of perforation without diffuse purulent peritonitis that lost their lives from profound sepsis are not included. We see from scanning the list that perforation of the appendix caused diffuse purulent peritonitis in forty-one cases, and that there were only twenty cases from all the other causes combined.

One of the most unfortunate cases dealt with was No. 374. A young woman had submitted to a dilatation of the uterus for the relief of dysmenorrhea. Pain set in, and when I saw her she was very much distended and in a desperate condition. Notwithstanding what I thought at that time to be a thorough washing and drainage, she succumbed.

A large incision is essential in all cases.

Now, just a word, as to the replacing of the intestines after washing has been carried out. Some may think that this is difficult. It can be easily accomplished if the assistant, turning the palms of the hands outwards, grasps the two sides of the incision, and lifts up as if he intended to lift the patient off the table. The abdominal parietes are thus elevated and the intestines are readily replaced by the operator.

Must a surgeon be brave to close such an abdomen? I had that feeling at first, and closed my first case with fear and trembling. Many comments were made by those who saw it done, but the patient recovered.

In a recent discussion of this subject, after Dr. J. B. Murphy, of Chicago, had read a paper on the treatment of diffuse purulent peritonitis, I gave the results of my experience, as prepared for, but not given, at the meeting of the British Medical Association. It seemed odd that we should both obtain such a marked improvement in our statistics by two diametrically opposed methods of procedure. Murphy stated that he adopted a plan whereby he first relieved pressure

by incision; secondly, established drainage without washing; thirdly, maintained drainage by posture; and, fourthly, washed the blood by intrarectal injections of salt solution. It is difficult to understand why this difference should exist. Let us for a moment compare the two methods of treatment. We both make an incision and close off the opening through which the septic condition has been originally established. He establishes drainage, endeavoring to drain off the intraperitoneal fluid without washing or sponging the cavity. I wash most thoroughly every atom of septic material that can be removed without using a very forcible stream of salt solution, and instead of draining, close the cavity and leave it full of salt solution. He places the patient in Fowler's position, with the chest elevated, the pelvis lowered, to drain away the poisons from the upper or diaphragmatic zone. I keep the patient lying in a recumbent position, so that the heart may be given as little as possible to do in its embarrassed and enfeebled condition. We both endeavor to wash the blood with salt solution, whether this be accomplished through the subcutaneous tissue or the intestinal tract. Several of my friends have been adopting this method of evisceration, washing and closure of the wound, leaving the abdominal cavity full of saline solution, with good results.

Some years ago I endeavored to explain to myself the *rationale* of the treatment adopted by Alonzo Clark. I found that on post-mortem examination of patients dying from an over-dose of opium, it had been discovered that there were many congested patches, well marked and distinct, studding the peritoneum. I believe that this indicates that large doses of opium delay absorption from the peritoneal cavity, and that it was owing to this fact that Alonzo Clark obtained such good results. If we can delay absorption until a certain condition of immunity to the toxines is produced, we are able to tide the patient over the critical period and save life.

FAUCIAL TONSILS—ABNORMAL CONDITIONS AND TREATMENT.*

By JOHN HUNTER, M.B.

In medicine as in war it is the results that attract attention rather than the slower processes that lead up to them. In war the tidings of victory or defeat are heralded world-wide whereas but little interest is taken in the details that assured the victory or the neglect of which courted defeat. With our patients we are very anxious to ascertain the morbid conditions present, but are we not likely to be far less zealous in endeavoring to seek out other possible sources of infection that may be slowly undermining health. How many thousand prescriptions have been written for mixtures to relieve dyspepsia, or cough, when a careful examination of the upper portion of the digestive or respiratory tracts would have revealed the most potent etiological factors in producing the disturbance. A young lady brought to her physician a large handful of prescriptions given for the relief of a spasmodic cough by men of repute. The detection and removal of a small septal spur rendered immediate and permanent relief. It might not be an easy task to prove that a diseased tonsil was the most potent factor in producing pulmonary or gastro-intestinal disturbance, or a mild form of general septicæmia, yet no one could question the undesirability of having a more or less continuous discharge from a septic focus in a submerged tonsil.

When a patient comes with a breath laden with the odor peculiar to septic material—a hyperæmic condition of faucial pharyngeal, or laryngeal structures, cough, or gastro-intestinal disturbance, the physician will quite often find himself well repaid, if with a good light, a retractor for the anterior pillars, and a probe he searches diligently for disease, especially in the crypts or lacunæ of a submerged or atrophied tonsil. The more deeply the tonsil is hidden out of sight the more suspicious the physician should be of its character, for like venereal disease the septic tonsil may be found in the most sequestered retreat. A young man came to his physician to seek relief from an attack of acute specific urethritis. He scornfully resented the imputation of having associated with anything "common or unclean," and asserted that his only amorous indulgences had been with one who was a most zealous church worker, and

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therefore beyond reproach. The microscope relentlessly revealed the gonococcus despite the origin from an irreproachable source. The fact that a submerged tonsil is unobtrusive is not positive proof of its innocuous character.

The purport of these post graduate clinics of the Western Hospital being of a practical rather than of a didactic character, I can perhaps more briefly and profitably discuss my subject under the following heads:

I. Normal conditions. II. Abnormal conditions. III. Treatment of latter.

Normal Conditions.

The faucial tonsils, two in number, right and left, situated between the palato-glossus and palato-pharyngeus muscles, known as the anterior and posterior pillars of the fauces, are practically enlarged lymph nodes. The tonsil has not afferent vessels like the regular lymph gland or node, but the fact remains, that the fluids of the mouth, laden with other material such as inorganic matter or micro-organisms find their way through the tonsils into their efferent vessels, and are conveyed by these through the deep cervical lymphaties into the general circulation. The normal tonsil varies in size. It is somewhat almond-shaped, about an inch long by half an inch in width and depth. The outer surface rests on the superior constrictor muscle, which separates it from the ascending pharyngeal and the internal carotid arteries. The lateral surfaces are in contact with the pillars of the fauces, and are often found to be quite adherent to these. The inner or free surface presents from 12 to 15 little depressions known as crypts or lacunæ which extend the full depth of the tonsil and give the sponge-like appearance. If the walls of one of these crypts be examined several minute openings may be detected. These are the outlets of little follicles whose secretion is poured into the crypts, and when abundant appears on the surface of the tonsil as an exudate. The inner surface of the tonsil and also the walls of the crypts and follicles are lined with mucous membrane. A threefold function is assigned to this membrane. (I.) It permits the leucocytes to escape into the follicles and crypts, and (II.) allows fluids, inorganic material, and some microbes to pass into the lymphatic spaces found in the tonsil. (III.) When healthy it acts as a barrier against the entrance of micro-organisms. Other functions are ascribed to the tonsil,—physical in keeping pillars apart, the furnishing of a lubricant for the easier passage of the food, and probably a so-called internal secretion.

Abnormal Conditions.

The location of the tonsils, and the easy access to their crypts and follicles, make them very vulnerable points of attacks for pyogenic and other forms of infectious bacterial. The mucous membrane especially suffers, and the crypts and deeper structures are affected more or less severely in all the infectious diseases of childhood. The exudate thrown out on the surface of the tonsil or embedded in the superficial tissues, varies in quantity and composition. In a mild form of tonsillitis the tonsil is swollen, hyperæmic and covered more or less densely with an albuminous exudate. A more virulent source of infection might involve the crypts or lacunæ, and follicles, and produce ulcerative tonsillitis. These ulcers may vary much in number and size. The specific micro-organism of diphtheria gives rise to a thick fibrinous exudate. When infection is due to pyogenic bacteria, the lymphoid tissues of the tonsil may become involved and the suppurative process, known as quinsy, produced or the infection may spread to neighboring tissues, and cause one or more abscesses to form, the purulent contents of which may be evacuated into the mouth or pharynx, or burrow deeply along the structures of the neck, opening externally or into the larynx, oesophagus or chest. Such abscesses sometimes prove rapidly fatal.

In childhood and adolescence any cause of irritation,—nutritive, mechanical, vascular or neurotic, may give rise to a proliferation of either or both of the tissues of the tonsil,—lymphoid or fibrous, and produce hypertrophy. The density of the enlarged tonsil will depend on which tissue is most involved hence the softer and harder varieties. In childhood the lymph cells are the main elements in the hypertrophy, hence the softer consistency in this period of life.

The tonsils, like any other structure in the body, may be the seat of benign or malignant growths, but a description of these belongs rather to the domain of general surgery. I shall therefore devote the very limited time at my disposal to a description of the submerged, compressed, or atrophied tonsil. This condition of the tonsil is almost invariably overlooked by the general practitioner, and occasionally even by the specialist, in patients in adult life. To be able to make a diagnosis in these cases, three or four things are essential. A good light, some form of retractor, a hook or blunt knife to break down the adhesions between pillars and tonsils, and different sized probes for penetrating the occluded mouths of the crypts. When the submerged tonsil, has been fully exposed for examination, the following con-

ditions may be found. The tissues may be quite normal, but present a condition somewhat analogous to a compressed sponge. There is generally more or less atrophy of the structures, and pyogenic or other infective bacteria may become occluded in the crypts and follicles and give rise to chronic suppurative processes. The discharge from these septic tanks may be continuos or intermittent, and can readily be conveyed by the saliva and food to the stomach. If it be in sufficient quantity or of a virulent type it may readily give rise to various forms of gastro-intestinal disturbance and to septicæmia or chemical changes may take place, in the purulent discharge and noxious gases form. These may be conveyed to the lungs and there set up irritation. The infectious material may be carried from a diseased submerged tonsil by its efferent lymphatic vessels into the general vascular circulation, and according to its character, cause tuberculosis, rheumatism, pneumonia, pleurisy, septic arthritis or pericarditis, for experiments prove most conclusively that inorganic material or infectious bacteria can, when the mucous membrane of the crypts is diseased, pass readily from the tonsil through the cervical and thoracic lymphatics to the heart and lungs.

Treatment of Morbid Conditions.

Normal tonsils are the legacy of heredity, and their preservation in health a question of hygiene and nutrition. The location, structure, and functions of the tonsils make them quite vulnerable to contaminated food and air, and to sudden changes of temperature. Pathological products from the stomach and lungs may infect them. The morbid conditions of the tonsils produced by the exauthematous diseases incident to childhood, by typhoid or other infection, are generally limited to the more superfical structures, mucous and sub-mucous tissues, crypts, etc., and are best relieved by hygienic and sanitory measures, restricted diet, purgatives, and antiseptic gargles and sprays. In case of ulceration, the ulcers may be cleansed and cauterized. Specific infection from diphtheria, syphilis or tuberculosis, requires in addition to the above measures antitoxin, mercurials, iodides or germicides as the case may be. The opsonic theory may be tested in these cases. Where the pyogenic bacteria have penetrated more deeply and produced an abscess in the tonsil (quinsy), or in the surrounding tissues, the suppurative process may be hastened by hot poultices applied externally and relief obtained by an early and free incision. When there is difficulty in locating the site for an incision or in getting the patient's consent to make one, the pain can be relieved, and,

if necessary, the heart's action improved by a hypodermic injection of morphine and strychnia. In many cases the relief that follows this simple measure is most gratifying to both patient and physician. All morbid products emanating from diseased tonsils should be destroyed.

In hypertrophy of the tonsils, relief is to be obtained by surgical measures. While atrophy may take place, yet the pernicious effects on mental and physical development caused by enlarged tonsils and adenoids obstructing the free passage of a sufficient supply of air to the lungs, render the early removal of these imperative. In childhood as the enlargement is chiefly due to proliferation of the lymph elements, the consistency is less firm and the guillotine answers about all purposes. As adenoids are a frequent complication and require removal, an anaesthetic—preferably nitrous oxide or ether—should be used. Any adhesions should be broken up, lest the pillars be caught in the ring of the instrument and injured. Engage the lower edge of the tonsil first and as the guillotine is slightly raised and pressed against the pillars, the rest of the tonsil protrudes through the ring. The fork is then pushed forward in order to draw the tonsil still further through the ring, and to hold it in position while the blade is drawn forward. Hemorrhage may be quite profuse at first, but generally ceases in a short time. If not pressure, ice externally or styptics can be applied. If not controlled by these measures, mattress or other forms of suture may be used to secure the stump. When both tonsils have to be removed the hemorrhage will be very much lessened by the use of the wire snare for removal of the first one. When the wire is drawn through slowly the stump remains quite dry. When the hyprotrophy is due to an increase in the fibrous tissue the density is much greater in these cases, and on account of the liability to hemorrhage from the ends of the blood vessels remaining open, the use of the snare is much the safer method. Adhesions should be broken up to allow the wire—an 8 or 10 piano wire—to engage the base of the tonsil. Care must be taken that the loop of the wire be not left too long to come entirely within the canula of the snare, otherwise a portion of tissue remains uncut, and it is painful to the patient to have to endure the delay, and annoying to the physician to have to use a knife or scissors. Semi-solid food may be taken at first, and gargles and spray used after the 2nd day. Rest in bed for a day or two, and a very quiet life should be advised for a week or so.

The treatment of benign or malignant tumors consists in removal by snare or complete eradication by cautery or other surgical measures that need not be detailed here.

We come now to discuss briefly the treatment of the submerged morbid tonsil. Different methods are in vogue, topical applications such as tincture of iodine or some of the silver salts, *e.g.*, Argyrol 20-40 grs. to the ounce, or destruction of diseased tissue by cautery. Complete enucleation of the tonsil is by far the most efficient measure. The adhesions to the faucial pillars are broken down by the aid of a retractor and hook, or blunt edged knife with blade placed at a suitable angle to the handle. The tonsil may be seized by a tenaculum and drawn inward, while the snare is adjusted around its base, or it may be removed piece-meal by a tonsil punch, or enucleated by the finger. Whatever method of procedure suggests itself to the surgeon, the object to be aimed at is the complete removal of all the tonsil tissue whether in a normal or abnormal condition. If any portion of the tonsil be left, the crypts and follicles may become infected, and a septic focus again established. The surgeon must remember that the tonsil is an encapsulated gland like the kidney or ovary, and its removal in its capsule, the object to be kept in view in treating submerged morbid tonsils. At the risk of some repetition of what has already been said, if the tonsil be seized by a double tenaculum, one prong engaging the upper end and the other the lower one, and drawn inward and forward, the adhesions broken up and the coil applied at the base, the tonsil with its entire capsule may be removed. The little fold known as the plica-tonsillaris extending from the anterior pillar over the lower end of the tonsil should be divided so as to prevent a pocket being formed in the lower portion of the cavity from which the diseased tonsil has been removed. The fossa-tonsillaris, the little cavity above the tonsil, is often diseased. It should be curetted and brushed with a disinfectant.

CLINICAL CASES:—1. GALL-STONES. 2. ABSENCE OF LIVER DULNESS. 3. CARCINOMATA OF LIVER.

By EVERETT D. HICKS, Port Dover Sanatorium.

Case I.—Patient.—Male aet. 69:—Has been complaining of pain in stomach at long intervals, for two years. About January 1st, 1906, he had a sharp attack of abdominal colic, pain being referred to the right shoulder and to the epigastrium—jaundice succeeded the pain and the urine darkened markedly. Examination in the early part of January elicited no gall-bladder tenderness nor any other tender spot. The liver dulness was decreased. The patient seemed otherwise in good health but was losing flesh. The pain occurred at more frequent intervals in spite of all kinds of medical treatment. On February 26th, I took an X-Ray photograph of the liver region. The negative showed a thickening in the gall-bladder region. I advised operation. The night following the patient was seized with severe pain, a very sharp rigor and sweat. When I arrived two hours later he was unconscious and in collapse, resp. ten per minute, pulse forty, feeble, intermittent and fluttering. Under stimulation he pulled up somewhat, recovering consciousness about five hours later. From this time he had an irregular fever, never high, 100 to 101½, pulse 96 to 115. For a few days no more pains occurred and we hoped that the gall-stone had passed safely through. Five days after this attack the pain came back and gradually increased in severity for a week. At the end of this time examination showed the liver dulness absolutely absent, no marked tenderness, some jaundice and a very dry, coated tongue. The patient was drowsy and in a semi-typhoid state. On March 11th, assisted by Dr. Stanton of Simcoe, I operated, making an incision along the margin of the ribs. The colon and omentum were drawn high up so as to completely cover the liver anteriorly and this was the cause of the tympanitic note. On dissecting off the colon we found the liver drawn down towards the back, its upper surface looking forward. By careful dissection we liberated it and reached the gall-bladder far back under the free margin. It was gangrenous. On recognizing the condition we walled off the abscess with gauze and after puncturing the gall-bladder mopped up the pus, probably a pint. No gall-stones could be felt. Time of operation forty minutes. Patient was a little more jaundiced the following day, due no doubt to absorption of bile by peritoneum and omentum. The jaundice cleared up entirely and

pulse and temperature dropped to normal on the second day. On the third day the temperature was 96, pulse 84, but both were normal next day. The wound did well, the fistulous tract being well walled off. Bile alone escaped the last three days. The patient lived ten days, death being due to simple weakening of the vital powers. A review of this case after operation does not alter the gall-stone diagnosis. The puzzling feature was the abscence of liver dulness and I cannot find in any work at my command a similar case with this condition of affairs as the cause. In a recent *Lancet* (January 20th, 1906), Mr. Moynihan explains clearly the other features of a non-malignant chronic case such as this, the loss of weight, the cirrhosis, the intermittent jaundice.

In contra-distinction to Case I. is Case II., seen last summer in consultation. Patient aet. 75, jaundiced six weeks, no pain, no increase or decrease of liver dulness, no nodules. Bowels very constipated, clay-colored stools, etc. Jaundice of a deep grade gradually growing deeper. Diagnosis of probable carcinoma made. Post-mortem a month later showed carcinoma involving the bile ducts first by position and later by extension.

Case III.—Male, aet. 73—seen in consultation summer, 1905. Had an indefinite distress, not a pain, in the epigastric region, loss of appetite and loss of weight, stomach contents normal, liver a little enlarged. Diagnosis of carcinoma of the liver made from the general appearance of the patient. Two or three months later a nodule could be felt. Patient lived eight months but was never at any time in pain nor at all jaundiced. He gradually lost strength and weight. Post-mortem showed one large carcinoma of the liver about the size of a small fist. No secondary nodules were found and no adhesions were present.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP AND F. A. CLARKSON.

Methods of Treating Exophthalmic Goiter.

The following results were obtained by Paul Sainton in the treatment of exophthalmic goiter with thyroid serum, or antithyroidin: In three patients the symptoms disappeared entirely; three others were greatly improved, and in two still under treatment, the symptoms are disappearing. From 2.5 to 3 Gm. (38 to 45 min.) in water or wine were administered every second day for three weeks or a month. The serum was then discontinued for one week, and then given again for one month. The pulse soon became less frequent, and the thyroid tumor, exophthalmos and tremos disappeared progressively, but much later.

The duration of the treatment varies between six months and one year. With favorable cases, the periods for discontinuing treatment can be progressively increased. The year following the cure it is advisable to prescribe one or two courses of treatment of fifteen days each.

Good results have been obtained by a number of investigators with the milk of thyroidectomized goats, but they cannot compare with the results obtained with the serum. The dried meat powder prepared from the animals at the suggestion of Moebius has been found worthless. Similarly, the dried serum is less active than the fresh.—*Rev. de Therap. med.-chirurg.*

Salt-Free Treatment of Epilepsy.

Alfred Gordon, in New York *Medical Journal* of October 20th, discusses the result of treatment of epilepsy, with special reference to the effect of withdrawing salt from the dietary. According to Claude and Villaret, introduction of large doses of sodium chloride in an organism insufficiently fed, produces a considerable increase of elimination; when the salt is removed from the régime the sodium chloride of the organism continues to be eliminated, phosphoric acid is increased, and urea diminishes in quantity. On the other hand, Gaillard and

Paisseau prove that the retention of urea in the tissues can be accomplished *only* by chloride of sodium, that substances not combined with albuminoids, can exist only by the aid of the salt, which attracts the water necessary for their dilution. When the organism is deprived of its alimentary salt, it utilizes the reserve molecules of the chlorides, which are promptly eliminated by the kidneys. Thus it follows that the deprivation of salt leads to a discharge of material not combined with albuminoid substance, as urea, while phosphorus, intimately connected with nuclei of cells, remains undisturbed, the role that sodium chloride plays in osmosis is thus made evident. In a series of 37 cases of epilepsy, Gordon experimented with the above ideas in view. He concludes that the deprivation of alimentary salt has a favorable effect on the convulsive seizures, as also have strict attention to dietetic and hygienic rules, but if the bromide treatment is carried on in conjunction with suppression of the daily allowance of salt, the results obtained are considerably more satisfactory. That the elimination of such products as urea is facilitated by the withdrawal of salt from the diet (in consequence of increased action on the part of the residual chloride molecules of the organism) is, according to Gordon's personal views, corroborative of the toxic pathogenesis of epilepsy.

In several uncomplicated cases, where the seizures occurred periodically, he administered methylene blue a few hours before the convulsions were expected. The urine passed involuntarily during the fits was in in each case clear, but the bluish tinge commenced shortly after the seizures; this fact is in itself suggestive of an auto-intoxication of the organism culminating in a convulsion. He concludes both theoretically, and from his practical experiments, that the results of a course of bromides in epileptics are influenced by the withdrawal of the daily allowance of alimentary salt.

Gastric Ulcer.

The Leuhartz treatment of gastric ulcer is discussed by Habermann in the *Medical Record* of June. In brief it is as follows: Absolute rest in bed for at least four weeks, almost continuous use of ice-bag over epigastrium for a fortnight; administration of 200 to 300 c.c of iced milk, two to four beaten eggs (preferably beaten whole with a little wine and sugar), in teaspoonful doses, well chilled; in addition 2.0 gms. of bismuth subnitrate at a dose for the first ten days.

This treatment "binds" the supersecrative acid, relieves

the pain, causes the vomiting to cease and reinforces the general condition of the patient.

Coryza.

Lacroix (*Concours Medical Practitioner,* July, 1906), recommends the use of formic aldehyde (formal, 40 per cent.), as an inhalation in acute rhinitis. One and a half drachms of formic aldehyde are placed in a wide mouthed bottle, and the patient inspires gently, as if using a smelling bottle. This is repeated about once every hour for a few minutes at a time; the patient stopping for a moment or two whenever the tingling sensation becomes painful. It is stated to give great relief.

Treatment of Epilepsy.

Dr. W. Runge, after fully discussing the various treatments of epilepsy heretofore in vogue and also those at present, claims that the bromides are more widely used than any other drugs at the present time. The methods of administration and the preparations used are very numerous. Most authors consider potassium bromide to be the most effective preparation, or, where this cannot be given, sodium bromide, ammonium bromide, or lithium bromatum. Strontium bromide has been much praised of late, on the ground that the organism is more tolerant of it than of potassium bromide, and that the effect is equally great. The great point in the administration of bromide is that it should be continued over a long enough period. The bromide treatment still has its opponents, the opposition being based either on scepticism as to the results obtained, or on the fear of bromism. Fürstner and Binswanger believe that the fear of bromism is exaggerated, and that careful administration of the drug will, as a rule, prevent its appearance. To counteract ill-effects on the state of nutrition, tonics, combined with hydrotherapy, and careful diet are recommended; for the indigestion, mineral waters and much milk; to increase the excretion of urine, diuretics; where the heart is affected, the avoidance of potassium bromide; and in severe cases, a very cautious administration of bromides, or even relinquishing the treatment; for the salivaiton, tannin and herba hyoscyami; for acne, arsenic; and in addition, baths, washing the body with fluid and potash soaps, and much muscular work. Binswanger answers the objection that bromides are in danger of doing psychical injury by the statement that such injury as the result of bromides is temporary, but that frequent fits lead to a permanent defect of

intelligence. In order to avoid bromism, new combinations of bromium have been introduced—as, for example, bromipin, an organic compound of bromium with oil of sesame; bromalin, a compound of bromine and formaldehyde derivatives; bromokoll, of bromine with gelatine and tannin. Lorenz treated thirty-four epileptics with bromipin, and found that there was no injury to the general condition, no loss of appetite, and the patients usually increased in weight; in five an acne, which had appeared during a previous treatment with bromides, disappeared; and in sixteen there was considerable improvement. It is also stated that such advantages as these are not the main advantage, which is that when the bromipin is used more bromine is absorbed into the organism, and a better effect therefore produced. Toulouse and Richet introduced in 1899 the use of a diet poor in sodium chloride as a means of rendering the bromine given more effective; the treatment being based upon the fact that bromine in the organism takes the place of the chlorine, and a diet which contains as little sodium chloride as possible will render the patient more sensitive to bromine. A disadvantage of this method is that the patient quickly tires of the diet without salt, and to remedy this defect Balint introduced a new method, namely, of using sodium bromide in bread instead of common salt, and of thus retaining the ordinary salty taste. His diet was as follows: 1-2 to one litre of milk, 40 to 50 gr. of butter, 3 eggs, 300 to 400 grams of bread and fruit; this diet contained 2 grams of common salt and 3 grams of bromine salt. He treated on these lines 28 patients for from 35 to 40 days; in 9 recent cases and in 15 out of 19 inveterate cases the fits ceased; in the remaining four cases there was improvement, and in no case was bromism observed. The fits soon returned at the end of the cure, but the effect lasted longer the longer the diet was continued. To meet opponents who believed the result to be merely due to the unirritating diet, Balint tried the same diet without the substitution of sodium bromide for sodium chloride, and found that it had no effect on the frequency of the fits. Other combinations of bromine have been recommended. Gowers advised the combination of bromine with belladonna, digitalis, and iron. Breach gives strychnine with bromine, etc. Bechterew's method is much followed—that of giving the bromides in combination with infusum adonis vernalis. In some of his cases Bechterew gave codeina with bromides, and found that the combination was sometimes effective where bromides alone had failed.

Flechsig's combined use of opium and bromium is widely used. It is only suitable for patients in an institution where its effect can be carefully watched, but in spite of the danger of severe bromism it is warmly recommended by many people.—*Zentralbl. f. die gesamte Therapie.—Medical Bulletin.*

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

Treatment of Diffuse and General Peritonitis. Dr. John H. Gibbons. (Philadelphia Pediatric Society, in June, 1906, Archives.)

There are three methods of treating general peritonitis: (1) non-operative; (2) opening the abdomen with irrigation; (3) opening the abdomen with simple drainage. The third method is the one strongly endorsed. He quoted Murphy, who had reported 29 cases treated in this way with one death, and that occurred from pneumonia.

The treatment consists in making a small opening in the abdomen, closing the perforation in the appendix, or removing it, introducing a large drainage tube into the pelvis, placing the patient into a semi-sitting position, and the administration of a quart of salt solution, every two hours, by the rectum.

His claim is that simply opening the abdomen relieves the pressure under which the pus rests, and this is all that is necessary to stop absorption from a pus cavity in any part of the body. No more manipulation than is absolutely necessary to remove the cause and drain the abdomen.

Children responded better to treatment in these cases than do adults. The use of saline laxatives was strongly condemned, on the ground that it churned up the pus around the peritoneum.

Dr. Deaver, in discussing the paper, fully agreed with the writer. In referring to the folly of giving laxatives in appendicitis, he mentioned a case operated on by him, and where calomel and a saline had been given. When the abdomen was opened, feacal matter was seen to be flowing freely through a perforated appendix.

Stricture of the Oesophagus with Gastrostomy. (Dr. Jopson, at the Philadelphia Ped. Society, reported in the Archives of Pediatrics.)

Six years ago he presented before the Society a child four years old, on whom he had performed gastrostomy for œsophageal

stricture resulting from swallowing lye. The operation was successful and she went home with a fistula, through which she received all her nourishment. He saw her again in December, 1905, and her condition then was as follows: The œsophagus was absolutely impermeable to food and liquids, both of which were administered through the gastric fistula. She is in good health, and her development normal for a child of her age. The operation was the old-fashioned gastrostomy in two stages, and she formerly wore a belt with an inflated rubber pad over the fistulous opening to prevent leakage, which is usually an annoying feature in these cases. The modern operations obviate this more or less perfectly. In this case she is not now annoyed in this manner. She wears continually a large rubber tube in the opening, which is dilated over its former size. A piece of gauze is tied around the tube close to the abdominal wall to prevent it slipping in too far. This tube is carried up under the clothing to the patient's neck, bent on itself when not in use, and tried with a string. She takes into her stomach a variety of liquid foods, including many eggs, and also gratifies her appetite and varies her tastes by masticating meats and other solid foods, which are afterwards expectorated and not ingested. The manner of feeding is decidedly interesting, perhaps unique, and he had an opportunity of seeing her consume a glass of milk. She takes everything into her mouth before passing it into the fistula. When drinking milk, she takes about three swallows, the milk passing into the œsophagus as far as the stricture. This quantity she then injects into the tube by placing the tube in her mouth and regurgitating into it. By three or four of these manœuvres she empties an ordinary glass of milk with much gusto and apparent satisfaction. It was suggested to the father that the stricture might be relieved by a retrograde operation from the stomach. The father stated that he would allow the girl to attain years of discretion, and then she could judge for herself.

Strangulated Inguinal Hernia in Infants. (Nassau & Mutschler, at the Philadelphia Ped. Society, in the June Archives.)

An infant five weeks old, with a hernia strangulated for thirty hours. Operation under chloroform. The sac tied off high up. Perfect recovery.

A second case in a child thirty-four days old. Operation also performed with a good result.

In discussing these cases, Drs. Deaver and Wharton both stated that strangulation was very rare in infants. Hernia was common, but strangulation not so under 10 or 12 years of age.

Use of Citrate of Soda in Infant Feeding. Dr. Shaw, Albany, N.Y. Archives of Pediatrics, March, 1906.)

The reader of the paper first referred to previous papers by Wright, Poynton, Varot and others. He next related a series of laboratory and clinical experiments performed by himself. His laboratory experiments showed that when citrate of soda was added to milk in the strength of 1 grain to the ounce, the milk curdled in fine particles, instead of in a solid mass.

He then reported 18 clinical cases, the majority of which were suffering from gastro-intestinal indigestion. Of these 18 cases, 1 died, 4 showed losses, and 17 improved.

The preparation of the food was very simple. No attempt was made at percentage modification. The milk was diluted in proportions varying between 3 parts of water to 1 of milk, and 3 parts of milk to 1 of water. The milk was neither pasteurized nor sterilized. The citrate of soda was kept in a solution of 10 grains to the ounce, and this was added to the milk in the proportion of 1 grain to the ounce of milk. Where there was habitual vomiting this was increased to 3 grains to the ounce.

Further Observations of Citrate of Soda. Dr. J. W. Van Derslice, of Chicago. (Archives of Pediatrics, August, 1906.)

He had used citrate of soda for two years, and now reported 9 cases, all of whom did well on the milk prepared as described.

Both of these papers were severely criticized by several speakers—some approving of the method, others strongly disapproving. One doctor stated that he had been unsuccessful in its use. Dr. Caillé stated that the less interference there was with the chemical constitution of milk, the better.

It is evident that further trials will be necessary before a definite conclusion, either favorable or otherwise, can be reached.

W. J. G.

Editorials.

A TRUNK SEWER FOR TORONTO.

It seems that at last the citizens of Toronto realize the chief need of the city is a trunk sewer. One of our Controllers recently expressed his surprise that the city had not been indicted long ago for maintaining a nuisance. Three methods are proposed for the disposal of the city sewage, but each one of them involves the building of a trunk sewer nine or ten miles in length.

The first proposal is to pour the sewage, after screening it, into the lake. The City Engineer and some others favor this method, and give a positive opinion that such a procedure cannot possibly contaminate the city's water supply. On the other hand, Dr. Sheard, the Medical Health Officer, who is also chairman of the Provincial Board of Health, all the other members of the Board of Health, the late Board of Health which went out of office a few months ago, and many others are decidedly opposed to such a method.

The second method proposed is to pass the sewage through septic tanks and then pump it over certain farm lands. The City Engineer suggested at one time as an alternative proposition in the treatment of the sewage, to pump it upon 600 acres of land north of Danforth Avenue. It has recently been decided, however, that this plan would not prove satisfactory.

The third proposition is to pass the sewage through septic tanks and thence into bacteria beds. The establishment of such tanks and beds would add materially to the cost.

It has been decided to go on with the building of the main sewer which is likely to occupy not less than three years. It seems not improbable that by that time there will be improvements as to methods in the treatment of sewage, and the Council can then select the method deemed best.

At the meeting of the Provincial Board of Health held Nov. 15th, the general plan of the sewer itself as explained by the Engineer was approved of, while the question of the outfall and the sewage disposal system was allowed to stand for consideration at a future time.

HOSPITAL ORGANIZATION.

We have heard much during the last couple of years respecting the reorganization of the Toronto General Hospital, both as to general management and the personnel of the staff. One of the main features now under consideration is the conduct of the different departments. The question of hospital organization has become a very complex one in recent years.

We find on the one hand a great Institution like Johns Hopkins, of Baltimore, in which each department is under the control of one man who receives a large salary, devotes a large portion of his time to the hospital, but is allowed to do a certain amount of consulting practice. These head positions are open to all the world. Some friends of our Hospital would like to adopt a similar system, and import a certain number of heads from abroad. So far as we can learn, any arrangement of this kind would receive the unanimous and indignant opposition of the profession of Toronto.

We have, on the other hand, great institutions in various countries, but especially Great Britain, where there are a number of seniors in each of such departments as Medicine and Surgery. Some such system would seem to be best suited for hospitals in Canada. If such views prevail there will be no radical changes in that regard at present.

There appears to be almost a consensus of opinion that there should be an age and a time limit as to appointments. It is believed that very definite rules in this regard should be made as to future appointments.

There is some difference of opinion as to methods of appointment. As the relationship between the University Medical Faculty and the Hospital will be very intimate, the Professors of the teaching body should hold the majority of positions on the hospital staff. There should, however, be some representation of physicians and surgeons not connected with the Medical Faculty.

The new Board is unfortunately too large, but we have every reason to believe that its members are anxious to make the Hos-

pital as nearly perfect as possible, and are consumed with a desire to work in the interests of both the public and the profession.

THE UNIVERSITY OF TORONTO.

We are told that the following new buildings are likely to be erected on the grounds of the University of Toronto in the near future: four residence halls for men, a model High School for the faculty of Pedagogy, a new Knox College, a new Trinity College, a building for the Department of Forestry, and an addition to the Gymnasium. It seems not improbable that on account of the great development of the University in various directions many other buildings or additions to buildings will be required within the next twenty-five years. The question of providing sites for these various buildings is rather a serious one. The available space on University grounds is now very limited; in fact, many are of the opinion that even now portions of the grounds are overcrowded.

We find an excellent article on this subject in *The 'Varsity*, Nov. 15th, from which we extract the following: "The Lawn, the Campus, and the Athletic Field are no more than sufficient for athletic activities. The University is not merely a tutorial institution but athletics form an integral and essential part of its activities. The Athletic Field is in every way as important a part of the University equipment as the Convocation Hall, and any attempt to abolish it to use the space for other purposes will evoke strong protest." We may say that we are quite in sympathy with the views herein expressed

THE TREATMENT OF APPENDICITIS.

Certain medical journals in the United States, in speaking of the treatment of appendicitis, refer to what they call Dr. Oschner's Starving Cure of Appendicitis. The physicians of the province of Ontario know fairly well Dr. Oschner's views

on this subject. We do not know whether this distinguished physician claims priority as to this method of treatment or not. He certainly would not if he did not believe that he was the first to recommend the so-called Starvation Cure.

We desire, however, to call attention to the fact that Dr. Palmer Burrows, of Lindsay, Ont., has been paying special attention to the treatment of appendicitis for over twenty years.

At a meeting of the Ontario Medical Association held in Toronto eleven years ago last June, Dr. Burrows used these words: "The measures which I take to mark the *ne plus ultra* in the treatment of appendicitis are as follows: The filling of the bowels by means of the long tube to remove any source of irritation, hypodermic injections of morphine or morphine with atropine, and complete abstinence from food or the taking of it sparingly in order to secure digestive rest."

Similar views have been expressed by Dr. Burrows to many physicians in private conversation, and in medical journals, including the London *Lancet*.

So far as we know, Dr. Burrows is entitled to the claim of originality, so far as this plan of treatment is concerned.

THE GAME OF FOOTBALL.

We find in the November issue of the *Canada Lancet* an interesting editorial on Football Fatalities. The writer recalls examples of six young men of Toronto who came to their death by this game, and goes on to state that the game which caused last year in the United States the death of twenty-eight students, and injured over one thousand more, many of these permanently, should be condemned.

The Toronto *Globe*, of October 13th, expresses the opinion that no man should be allowed to play football who has not first passed a medical examination and been certified as fit for such strenuous exercise. The University authorities hold the same views, and since the sad fatalities to which we referred in our last issue, have enforced the rule that no stu

dent shall play the game until he has been passed by Dr. Goldie or Dr. Mackenzie, the regular appointed examiners.

In connection with such examination, the *Lancet* very aptly remarks that no medical selection can prevent fractured skulls, broken legs, dislocated necks and injuries to the internal organs. As a matter of fact, it is well known that many deaths occur in persons of splendid physique.

It seems unfortunate that the open game of football which is so popular in England, and which is so much less dangerous than the Rugby game, appears to meet with no great favor on this continent. One of the most interesting games of football that we have ever seen was an open game between two teams, one representing Scotland, the other representing England, at which there was an attendance of nearly 100,000. We understand that at a recent game in London there were over 110,000 present.

The writer in the *Lancet* concludes as follows: "In what we have said against football we are not uttering a word against any form of manly, healthful sport. What we are condemning is football as it is played. There is something wrong when the student body are vociferously cheering a game that but yesterday sent the College flag down to half-mast, and the day following may injure for life one or more of the participants. Surely it is within the wit of man to relieve the game of these risks. If this be impossible, and the game must be retained, then let us also have the duel, the gladiator, the bull-fight and the chariot-race at once to complete the cycle."

NOTES.

The University Medical Faculty.

We understand that on Nov. 1st there were enregistered in the medical faculty of the University of Toronto altogether 641 regular students and 70 occasional students, that is, students at the Dental College taking Anatomy.

The following are the numbers in the different years: First year, 188; second year, 145; third year, 156, and fourth year, 152.

St. Michael's Hospital, Toronto.

We are informed that the authorities of St. Michael's Hospital, Toronto, have decided to build large additions to that institution, namely, a large new wing north of the hospital, similar to the Hugh Ryan wing, and a large maternity hospital south of the present premises.

It is also hoped that in the near future the old section of the hospital will be remodelled. When completed the hospital will have three hundred beds.

Queen's University Endowment.

We understand that the work of raising half a million dollars endowment fund of Queen's University, Kingston, is progressing very favorably, and up to the end of October more than half the sum had been subscribed.

Toronto General Hospital.

A committee has been appointed to consider the reorganization of the medical staff of the General Hospital. The committee consists of two representatives from each of the interested parties as follows: Mayor Coatsworth and Ald. Noble, representing the City; Messrs. Byron E. Walker and W. T. White, representing the University of Toronto; Messrs. P. C. Larkin and J. W. Flavelle, the Donors; and Dr. J. O. Orr and Prof. A. B. McCallum the Government.

McGill University has undertaken the task of raising an endowment fund of a million dollars, and it appeals to the public for help. Mr. Robert Reford recently offered to contribute $50,000 on condition that $1,000,000 was raised within a year from citizens, past and present, of Montreal.

The following candidates have been elected by acclamation to the Medical Council of Ontario from the territorial divisions named: Division No. 1, Dr. J. L. Bray, Chatham; 3, Dr. J. MacArthur, London; 4, Dr. J. A. Robertson, Stratford; 6, Dr. Henry, Orangevlle; 7, Dr. P. Stuart, Milton; 8, Dr. S.

H. Glasgow, Welland; 10, Dr. E. E. King, Toronto; Dr. H. Bascom, Uxbridge; 13, Dr. S. C. Hillier, Bowmanville; 14, Dr. A. E. MacColl, Belleville; 15, Dr. W. Spankie, Wolfe Island; 16, Dr. J. Lane, Mallorytown; 17, Dr. M. O. Klotz, Ottawa.

A contest between Dr. John Mearns, Woodstock, and Dr. J. H. Carmack, of St. Thomas, will take place in Division No. 2; in No. 5 between Dr. L. Brock, Guelph, and Dr. Vardon, Galt; in No. 9 between Dr. R. Gibson, Sault Ste Marie, and Dr. Aylesworth, Collingwood; in No. 11 between Dr. A. A. Macdonald, Dr. J. S. Hart, and Dr. B. L. Riordan, Toronto.

Vaccination.

A curious and little-known fact regarding the history of vaccination for variola recently came under my notice. It appears that the "Gallas," a dark-skinned African race, of fine physical development, who inhabit the tract of country which lies south of Somaliland and some distance inland from the Indian Ocean, have for centuries practised vaccination as a protection against the deadly epidemics of smallpox which at intervals frequently decimate the natives of the "East Coast." In proof of its efficacy is the fact that the surrounding tribes suffer severely, while among the Gallas epidemics are unknown, and the occasional cases which do occur are of the mildest type, pitting being rarely seen.

That they are a nation of cattle-raisers is of interest, as also is the fact that they occupy an isolated position among their neighbors on account of their fondness for the latter's herds.

The inoculations are made on the side of the nose; beyond this my informant could give me no particulars, as the natives were most reticent regarding the whole matter.

That the Chinese and Gallas have forestalled one of our "modern" discoveries is something to which we should give more than passing thought. B. O'R.

Personals.

Dr. Adami, of Montreal, visited Toronto, Nov. 20th.

Dr. John R. Parry, of Hamilton, was married to Miss Breithaupt, Oct. 31st.

Dr. Arthur B. Wright, of Toronto, has been appointed President of the Canadian College Football Association.

Dr. S. T. Rutherford, of Listowel, returned Nov. 16th, after spending nine months abroad doing post-graduate work in Vienna and London.

Dr. Geo. W. Crosby (Tor. '04), of Dunchurch, Ont., is shortly going to London, England, with a view to special work in the eye, ear, nose and throat.

Dr. H. Horace Grant, of Louisville, Ky., was elected president of the Mississippi Valley Medical Association at the meeting held at Hot Springs, Ark., Nov. 5-8.

Prof. A. B. MacCallum, F.R.C.S., of the University of Toronto, received from Aberdeen University, at its quatercentenary celebration, the honorary degree of LL.D.

Geo. Wm. Ross (M.A. '01, M.B. '03, Tor.), who returned to Toronto recently from London, England, has gone to New York, and is engaged in research work in the Rockefeller Institute.

Dr. John L. Bradley (Trin. '94), who has practised in Creemore, Ont., for the last twelve years, has removed to Toronto and commenced practice at the corner of Wilton Avenue and Victoria Street.

Dr. Wm. H. Lowry (Tor. '02), formerly of Guelph, Ont., has returned to Canada after extended post-graduate work abroad, especially in England. He spent one year and a half in the Eye and Ear Infirmary of Birmingham, and will probably practise that specialty in Toronto.

Dr. C. B. Coughlin, who left Peterboro' Nov. 15th to assume his new position as Superintendent of the Deaf and Dumb Institute, Belleville, was on the evening of Nov. 7th the guest of honor at a large gathering of his personal and political friends in the rooms of the Young Conservatives' Club of that city. Many speeches appreciative of Dr. Coughlin's worth as a citizen and his ability as a professional man were made by prominent citizens of Peterboro'.

Dr. Gordon Campbell, of Montreal, and Dr. Graham Chambers, of Toronto, have been appointed secretaries for Canada for the Sixth International Dermatological Congress, to be held in New York, Sept. 9-14, 1907.

Dr. Geo. W. Badgerow has commenced consultation practice of the throat, nose and ear, at 64 Brook Street, Grosvenor Sq. W., London, England. He was recently appointed Surgical Registrar at the Throat Hospital, Golden Gate Square, West London.

Dr. Frank F. Allen, of Denver, Col., formerly of Cobourg, Ont., was married, Nov. 17th, to Miss Gage, a graduate nurse of a Denver hospital. Dr. and Mrs. Allen have gone to West China with a party of missionaries sent out by the Methodist Church in Canada.

Dr. B. E. McKenzie has been elected one of the representatives of Arts on the Senate of the Victoria University, and Dr. F. N. G. Starr a representative in Medicine on the Senate; also Dr. H. W. Aikins has been elected a member of the Board of Regents of the same university.

Dr. Levi Secord was seriously injured, Nov. 15th, while driving across the Grand Trunk tracks, at George Street, Brantford. He was struck by a train and thrown from his carriage, sustaining injuries which rendered him unconscious. At last accounts he was said to be recovering.

Obituary.

JAMES STEWART, M.D.

There appeared in our last issue an obituary notice of the late James Stewart, of Montreal. He was especially well known throughout the province of Ontario, and one of the most remarkable things in his career was the fact that he laid the foundation for his great reputation by careful research in a small country village while engaged in a very laborious practice. From this small country village he was brought to the great city of Montreal in consequence of his appointment to a professoriate in McGill Medical College.

We now reproduce the words of the Rev. James Barclay, spoken at the funeral ceremonies in St. Paul's Church, as we find them published in the Montreal *Medical Journal.*:

"We are met to pay our tribute of respect and affection to one whose professional fame and whose personal worth were widely and gratefully recognized, not only in this city, but throughout the Dominion. Had he himself been asked what should be said on this occasion, he would have answered: 'Let little or nothing be said.' If ever there was a man who was content to live unnoticed, and who would have been content to die unnoticed, it was Dr. James Stewart. All the honors that came to him in life were unsought. They were thrust upon him as the inevitable reward of sterling work and genuine worth. He was a man of retiring and reticent nature, and of a singularly quiet and unobtrusive bearing, and it was only those who knew him well who knew the riches of both mind and heart that lay hidden behind the simple and unassuming manner. He bore his weight of knowledge and skill, and the burden of his honors 'lightly like a flower.'

"He was a member of a noble profession, and he further ennobled it by the integrity of his character and the unselfishness of his services, and he enriched it by his valuable contributions. He was devoted to his life's work—an earnest and faithful student in his earlier days, he continued still to be a student when he had been promoted to a high place in the rank of teachers. Simplicity, sincerity, reverence, unselfish kindness, these were the features of Dr. Stewart's character that most impressed those who had the privilege of knowing him. Honored as perhaps few men have been with the confidence and esteem of his professional brethren, reverenced with the respect and affection of his students, he was trusted and beloved by his patients and warmly appreciated by his personal

friends. Montreal loses in him one of its worthiest citizens, and the medical profession loses one of its most gifted and most esteemed members. The knowledge he acquired and the skill to which he attained were ever regarded by him, not as means to self-promotion, but as gifts to be used in the service of his fellow-men, and that service was rendered with an unselfish readiness and generosity which secures for his memory a warm place in many a heart to-day. Not what he might make for himself, but what he might do for others, was the prevailing purpose of his life. Could he have known all the grateful and loving recollections that have been awakened by his death, all the kindly things that have been said of him, by his brethren, by his patients, by his friends, he would have felt that his life had not been in vain. 'He being dead, yet speaketh.' Through his teaching and his example he will still live, and the fruits of his life will be seen in the lives of many of the students who were privileged to know him as teacher and as pattern."

WILLIAM ALBERT BALL, M.D.

Dr. W. A. Ball, of 245 Bathurst Street, Toronto, died Nov. 3rd, of heart disease, aged 38. He received the degree of M.B. from the University of Toronto, and M.D. from the Trinity College in 1894. Soon after graduating he settled in Toronto, and acquired an extensive practice in the western portion of the city. He had been in poor health for six months befort his death.

HARRY A. DALY.

Mr. H. A. Daly, a graduate in Arts, '06, from the University of Toronto, and a third-year student in the faculty of medicine of the same university, died at St. Michael's Hospital of apoplexy following Bright's disease, Nov. 4th. Although he was known to have some disease of the kidneys, he was supposed to be in fairly good health when he was seized with obscure symptoms on the afternoon of the 3rd, and died in less than twenty-four hours thereafter. He was an excellent student, took a first-class stand at his examinations, and was extremely popular with the undergraduates. He was also much liked and highly respected by those of the professoriate who had the privilege of an intimate acquaintance with him.

Book Reviews

A Primer of Psychology and Mental Disease. For Use in Training Schools for Attendants and Nurses and in Medical Classes, and as a ready reference for the Practitioner. By C. B. Burr, M.D., Medical Director of Oak Grove Hospital, (Flint, Mich.,) for Mental and Nervous Diseases; formerly Medical Superintendent of the Eastern Michigan Asylum; Member of the American Medico-Psychological Association; of the American Medical Association; Foreign Associate Member Societe Medico-Psychologique of Paris, etc. Third edition. Thoroughly revised, with illustrations. Pages viii-183, 12mo. Bound in extra vellum cloth, $1.25 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This excellent book we consider of great service to the medical profession, for the descriptions of the various forms of mental diseases are most vivid, and the method of treatment advised is thoroughly up-to-date. The few pages on General Paresis are exceptionally fine, and we know of no other book where the cardinal points of this increasingly common disease are so clearly enunciated.

Medical students of the last few years are well trained in mental diseases, but to those who were unfortunate enough to be born too soon we take great pleasure in recommending Dr. Burr's work as one which will put them in possession of the greatest amount of detail in the shortest possible time.

The Combined Treatment in Diseases of the Eye. By G. Herbert Burnham, M.D., Tor., F.R.C.S., Edin., M.R.C.S., Eng., Professor of Ophthalmology and Otology at the University of Toronto, etc. London, H. K. Lewis. 1906.

Readers of ophthalmic literature who have become acquainted with Dr. Burnham's claims for pilocarpine will be interested in his record of sixteen years' experience. Combined with a thorough-going course of mercury and iodide of potash it would appear to be in his hands something of a panacea.

"In iritis or cyclo-iritis, it matters not what kind, whether it be acute or chronic, slow, gouty, rheumatic, with hypopyon or without, gonorrheal, specific or non-specific, tuberculosis, benign or fulminating sympathetic, it gives relief and finally freedom from the disease."

Again: "Deeply-seated ulcer of the cornea is quickly put past the dangerous stage and the resulting nebula is removed."

Such a potent anti-toxic agent to the tubercle bacillus and pneumococcus leaves little need for the researches of Wright and Römer.

It is, moreover, we are assured, potent in conical cornea, episcleritis and sclero-keratitis, hyalitis, optic neuritis, paralysis of ocular muscles and "disease of the eyes due to masturbation."

An appeal is made to the profession for its trial in "irregularities and diseases of the liver," in skin diseases, early cancer, tubercular laryngitis, localized and general neuritis, chronic rheumatism and tabes dorsalis.

Chemistry: General, Medical and Pharmaceutical (including the chemistry of the U.S. Pharmacopœia). A Manual on the Science of Chemistry and its Application in Medicine and Pharmacy. By JOHN ATTFIELD, F.R.S., M.A., Ph.D. (Tübingen) F.I.C., F.C.S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, 1862-96; formerly Demonstrator of Chemistry at St. Bartholomew's Hospital (London); honorary member of 23 societies, associations and colleges of pharmacy in Europe and America; one of the three editors of the British Pharmacopœia, 1885, editor of the Addendum to the British Pharmacopœia, editor of the British Pharmacopœia 1898, and of its Indian and Colonial Addendum, 1900. Edited by Leonard Dobbin, Ph.D. Würyburg, F.I.C., F.C.S., Lecturer on Chemistry in the University of Edinburgh; lately Examiner in Chemistry on the Board of Examiners for Scotland, of the Pharmaceutical Society of Great Britain. 19th edition. Published by LEA BROTHERS & Co., Philadelphia and New York. 1906.

The above is a compact volume of about 700 pages, designed more especially for medical and pharmaceutical students, equally useful to those having no opportunity of attending lectures as to the university student.

The book may be used as a guide to those studying experimental chemistry; in it is included more or less subject matter on all recognized remedial agents, compounds at present of interest only to the scientific chemist are omitted.

The first chapters take up in detail the metallic elements and their compounds, physical properties, reactions, also their practical applications and qualitative analysis.

The chemistry of vegetable and animal substances, the so-called organic chemistry, is next considered, excellent synoptical tables showing relations between members of the paraffin and various other series are found. The glucosides, alkaloids and urinary excretions also receive due attention. The volume closes with several chapters on volumetric and gravimetric analysis.

The style throughout is excellent, and although the various subjects are treated in detail, the book is one which one can read with ease by a beginner in the study of the science of chemistry. It combines not only the subject of chemistry, but the chemical and physical portions of a materia medica, and is thus doubly valuable to a student of medicine.

Green's Encyclopedia of Medicine and Surgery, Vol. II. (Bread to Ear). WILLIAM GREEN & SONS, Edinburgh and London, Publishers. 1906.

In this, the second volume of the series, the general arrangement of the subject matter, the cross-references, definitions, etc., follow closely the plan adhered to in the former. The author has before him the necessity of keeping pace with modern methods, as is shown by articles on such matters as cytodiagnosis, cryoscopy, dechlorination, and many others.

A number of full-page illustrations are included in this volume. Those on color vision are particularly noticeable. Articles on disinfection and diseases of the eye and ear occupy

considerable space. The various subjects are written by the most eminent authorities—Radcliffe, Crocker, Jules, Hutchison, Allingham, and many others of equal standing. The book is fully up to the high standard set by the first volume. The set will undoubtedly prove a valuable addition to the libraries of many busy practitioners.

In the Van. By Dr. Price-Brown McLeod & Allen, Publishers, Toronto.

This is a story of Canada and military life in the year 1813, and should be read with interest by every lover of the Dominion. Not only has the author caught the spirit of the early pioneer days, but he makes his portrayal vivid and fascinating to the reader, and the narrative speeds along, enlivened by incident and adventure, the interest being preserved until the very last word.

The book opens in a picturesque way with a description of the wedding of Lieutenant Harold Hanning and Helen Brandon in Westminster Abbey. The marriage is kept secret from the colonel of the regiment, Sir George Head, because, as the troops are on the eve of departing for Canada, his consent is sure to be withheld. Helen wins over the colonel to allow her to accompany her husband, and actually embarks on the warship *North King*. The voyage is long and terrible, but, finally, Halifax is reached. At a hall at the capital, Helen meets Maud Maxwell, who is inseparably riveted into the story, and they become friends immediately. The mid-winter journey from Halifax to Penetanguishene lies ahead, and, as soon as preparations are completed, the regiment starts on its perilous undertaking. Brief rests at Quebec and Montreal serve to give glimpses of the social life of those cities in the early days, and at last, after a severe overland march, the regiment reaches its destination. The building of the fort and the officers' quarters is graphically described, and the scenery of the Georgian Bay is depicted in all its primeval beauty.

It is, perhaps, natural that one of the most interesting figures in the book should be Dr. Beaumont. He is the physician of the regiment, and is an excellently drawn character. So, also, is the gallant Captain Morris. Both are aspirants for the hand of Maud Maxwell, and the reader is kept in suspense until the very end as to which is to be successful.

"In the Van" is a typically Canadian tale, and a pretty love story. Although there is not much attempt at plot, interest is by no means lacking. The book should receive more than passing attention at the hands of the reading Canadian public, and it deserves a prominent place on the list suitable for Yuletide purchasing.

Correspondence.

SOCIETY FOR THE REFORMATION OF INEBRIATES

To the Editor of The Practitioner:

Dear Sir,—The Ontario Society for the Reformation of Inebriates desires space for calling the attention of the benevolent public to its work and to its needs. Its object is the reclaiming of inebriates; its methods are as follows: Home treatment is given in suitable cases, and such cases as require hospital care are treated from one to three weeks in hospital. A friendly visitor, called a probation officer, takes the supervision of inebriates subsequent to treatment, finds them employment, and endeavors to bring them into touch with the church of their choice. The medical officer of the Society administers the treatment, and associated with him is a consulting committee of three leading physicians of Toronto. Arrangements have been made with the police authorities whereby persons arrested for drunkenness (when not hardened offenders) may be committed to the care of the Society instead of being sent to jail and forced to associate with the vicious and depraved. The medical treatment is conducted on strictly ethical lines—no secret remedies being used—and it is continued for three weeks, while the probation or parole is continued for several months. The scheme is a unique economic measure which for the class referred to renders prolonged detention in an institution unnecessary. It combines maximum efficiency with minimum expense. We wish to put this unique economic system to a crucial test, on a sufficiently ample scale to be used as an object-lesson, before the next meeting of the Ontario Legislature. The result, we do not doubt, would be eminently satisfactory and would more than justify legislation along the same lines. An eminent Oxford professor, and a Canadian, in a letter to the Secretary of this Society, speaks of the proposed legislation as follows: "I think the plan you propose is an excellent one, and I do hope it will be carried out."

At the last quarterly meeting of this Society the report of the officers was most gratifying, inasmuch as sixty per cent. of the cases of inebriates treated and cared for were doing remarkably well. In view of the satisfactory character of the report is was decided to make an appeal to the benevolent public for financial help to carry on the work efficiently and as an object-lesson before the next session of the Ontario Legislature.

Signed by order of Finance Committee,

E. J. Barrick, M.D.,
Chairman of Medical Consulting Committee.

A. M. Rosebrugh, M.D., *Secretary.*

S. C. Biggs, B.A., K.C., *Treasurer.*

Toron'o. November 1, 1906.

Miscellaneous

The Role of Iron in the Nutritive Process.

It is an established custom of physicians to administer iron whenever a patient with pale, waxy, or sallow complexion complains of extreme exhaustion, muscular feebleness, easily accelerated pulse, aphasia, anorexia and the several symptoms which constitute the characteristic issues of a qualitative or quantitative reduction of the corpuscular elements of the blood.

Such symptoms are unerring indications of anemia, and iron is beyond dispute a cure for that disorder. But while the chief therapeutic property of iron is that of an anti-anemic, the subordinate, or collateral, effects of the drug are manifold, and are worthy of far more consideration than they usually receive.

As a hemoglobin-contributor and multipler of red blood corpuscles, iron will doubtless forever stand supreme, but its utility is by no means restricted to anemic conditions, for one of the chief effects of iron—one quite often lost sight of—is its influence upon nutrition.

The primary effect of iron is a stimulation of the blood supply. This results from invigoration of the blood vessels. As a consequence of a more active blood stream, the digestive capacity is increased and the nutritive processes are correspondingly improved. Subsequently, iron increases the amount of hemoglobin contained in the red corpuscles. This imported hemoglobin converts the systematic oxygen into ozone, and thuswise oxidation, upon which nutrition directly depends, is restored to its proper standard.

It is impossible to emphasize the fact too strongly that it is necessary to do more than increase the appetite to correct nutritive disturbances. A voracious appetite does not necessarily imply an extensive appropriation of nutriment. On the contrary, it is commonly observed that individuals who eat ravenously suffer, the while, a progressive loss in physical weight and strength, even in the absence of all exertions that might account for such losses. And while it is obviously needful to relieve the existing anorexia in order to arrest a loss of weight, it is likewise essential that the capacity to properly digest food be fully restored before the nutritive processes can proceed in befitting order.

The manner in which iron begets an increase in appetite has only recently been perfectly understood. The earlier observers entertained the belief that an increase resulted from the mechanical effect of iron, and that this mechanical effect never

LISTERINE

The original antiseptic compound

Listerine is an efficient and very effective means of conveying to the innermost recesses and folds of the mucous membranes that mild and efficient mineral antiseptic, boracic acid, which it holds in perfect solution; and whilst there is no possibility of poisonous effect through the absorption of Listerine, its power to neutralize the products of putrefaction (thus preventing septic absorption) has been most satisfactorily determined.

Awarded Gold Medal (Highest Award) Lewis & Clark Centennial Exposition, Portland, 1905

Awarded Gold Medal (Highest Award) Louisiana Purchase Exposition, St. Louis, 1904

LISTERINE DERMATIC SOAP

A saponaceous detergent for use in the antiseptic treatment of diseases of the skin

Listerine Dermatic Soap contains the essential antiseptic constituents of eucalyptus (1%), mentha, gaultheria and thyme (each ½%), which enter into the composition of the well-known antiseptic preparation Listerine, while the quality of excellence of the soap-stock employed as the vehicle for this medication, will be readily apparent when used upon the most delicate skin, and upon the scalp. Listerine Dermatic Soap contains no animal fats, and none but the very best vegetable oils; before it is "milled" and pressed into cakes it is *superfatted* by the addition of an emollient oil, and the smooth, elastic condition of the skin secured by using Listerine Dermatic Soap is largely due to the presence of this ingredient. Unusual care is exercised in the preparation of Listerine Dermatic Soap, and as the antiseptic constituents of Listerine are added to the soap after it has received its surplus of unsaponified emollient oil, they retain their peculiar antiseptic virtues and fragrance.

A sample of Listerine Dermatic Soap may be had upon application to the manufacturers

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Bronze Medal (Highest Award) Exposition Universelle de 1900, Paris

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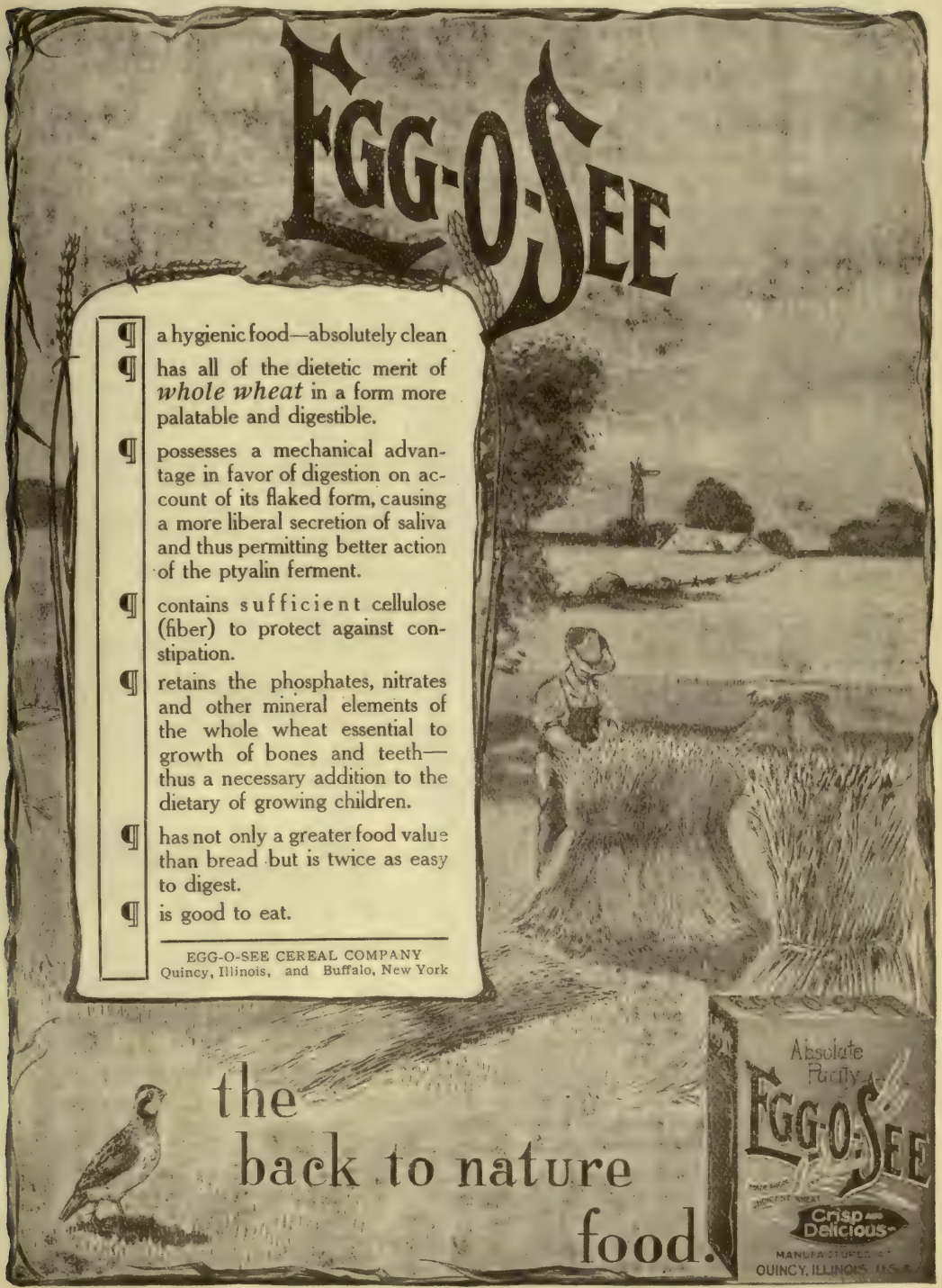

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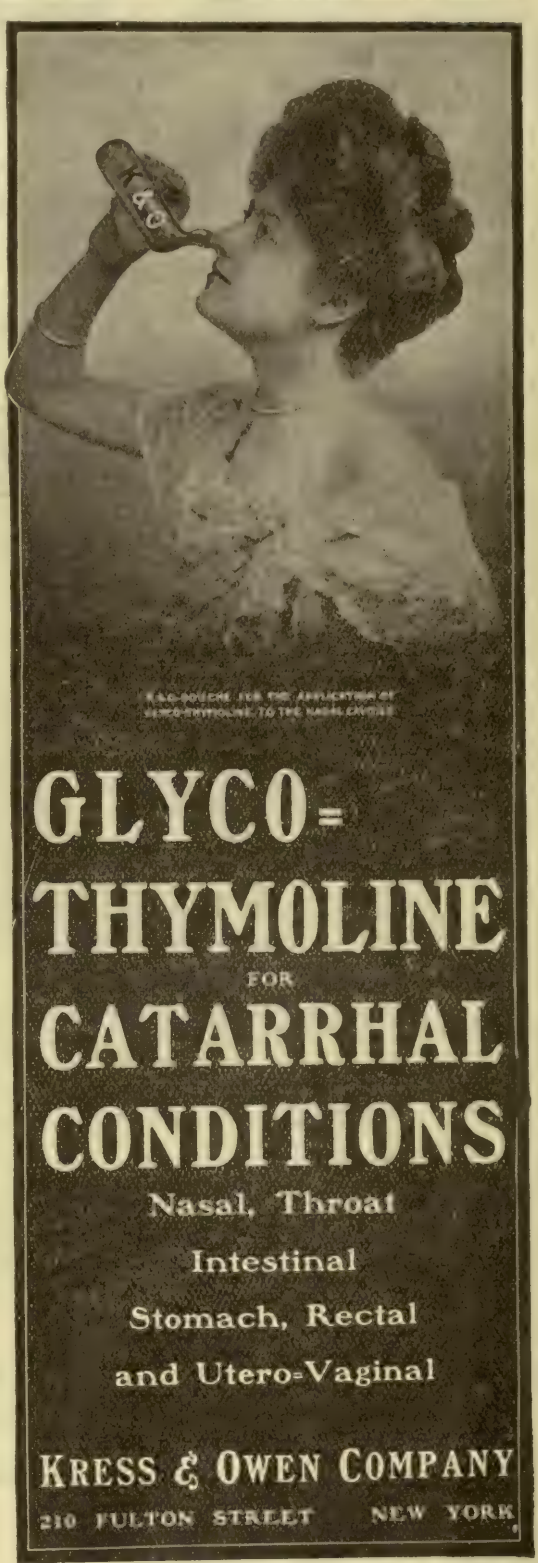

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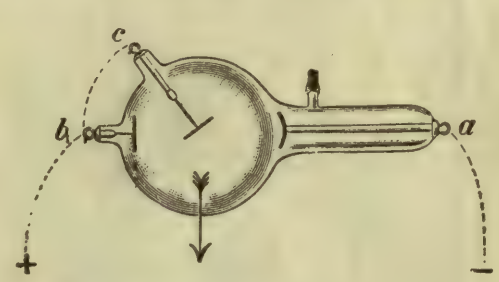

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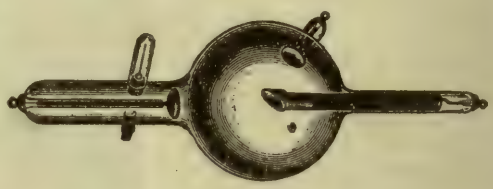

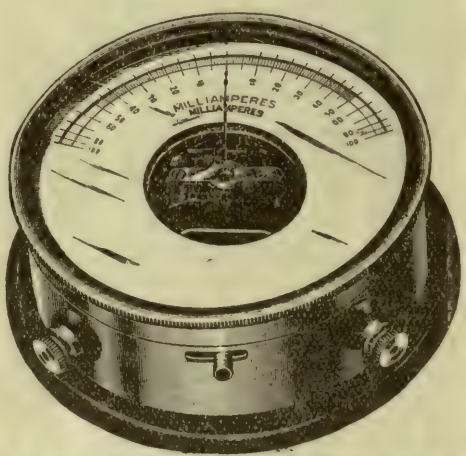

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manifested itself unless the drug was administered in some acid form. Later investigators advanced the theory that this mechanical effect could be secured by rendering the drug either strongly acid or alkaline. Recent observations have completely disproved the accuracy of both of those theories by inviting our attention to the indisputable fact that a neutral preparation of iron will relieve anorexia with greater celerity than will either an acid or an alkaline one. From the information gained from these observations, we are impelled to admit that the increase in appetite attending the employment of iron is due solely to the increased oxidation induced by its entrance into the blood stream. Accepting this as being true, we can readily understand the manner in which iron exerts its happy effect upon the nutritive processes.

The aforestated facts compel the admission that that preparation of iron which enters most rapidly into the blood stream is the one capable of producing the best results in all disturbances of nutrition. Acid preparations of iron diminish the alkalinity of the blood, thus depressing the distribution of nutriment, and alkaline preparations of the drug offend the mucous lining of the alimentary tract. For these reasons it is consistent with logic to extend preferment to that preparation of iron which is neutral in reaction. That preparation is the Pepto-Mangan (Gude).

Pepto-Mangan (Gude) is unquestionably the form of iron most closely resembling that which is native to the economy, and the striking affinity for it displayed by the circulating fluid causes us to concede that it possesses desirable attributes not common to any other preparation of the drug. Whence we take it that it is the precise form in which to administer iron when a correction of nutritive deficiencies is the end to be achieved.

In those conditions of weakened digestive power where the function is unable properly to take care of the food supply; when to administer the ordinary forms of iron would be but to increase the digestive disturbance, Pepto-Mangan (Gude) may be prescribed without apprehension, as the preparation is tolerated by the weakest stomach. Being practically predigested, Pepto-Mangan is immediately absorbed by the mucous membrane and taken up by the blood without the necessity of the weakened function being called upon to prepare it for assimilation, and therefore the entire system, including the digestive function, is strengthened and reconstructed. As a nutrient tonic in digestive disorders Pepto-Mangan (Gude) has no equal.

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Just How to Manage Otorrhoea.—By F. E. Burgevin, M.D., of Spiro, I.T.

Otorrhœa, from purulent middle-ear catarrh, the "running ears" of the laity, was at first my *bete noire*. I used the classic treatment of Pomeroy and others—syringing, insufflations of powdered boric acid, etc., sometimes with *benefit*, sometimes the reverse, but never by any chance *curing* any of them, until I dreaded to see a patient with cotton in his ears come into the office. Now I cure them in a few days or weeks without difficulty, and really prefer this class of cases to any other. When I was at the Manhattan Eye and Ear Hospital in 1890, Dr. Pomeroy said that one case had been under treatment nearly ten months and was *slightly improved*. He said that it required one or two years to cure this disease, and then it generally returned.

My method of treatment is as simple as it is effectual, and any doctor after reading my description attentively can use it as well as I can and cure every case. Once daily I fill the ear with a warm solution of some good peroxide of hydrogen, beginning with a 25 per cent. solution, and increasing the strength every day until the pure drug is used. Hydrozone is the same, only twice as strong, and I use it when I can get it simply from motives of economy. After cleansing the ear thoroughly, which at first may require from twenty minutes to two hours, according to the foulness of the auditory canal, I then instill a few drops of Glycozone (warmed) and close the canal securely with a bit of absorbent cotton. This is allowed to remain *in situ* until the next treatment.

The first cleansing should be very thorough, the peroxide being repeatedly instilled until all foaming ceases. In some cases it may require two, three or more treatments to cleanse the ear properly, especially if the lumen be occluded by a furuncle, or by swelling, or inspissated discharge. Do not be discouraged by any little difficulty like this, keep right on, and you will finally succeed in getting the ear *clean*. After that it is plain sailing. Thenceforth the daily treatment need not consume more than ten to twenty minutes. It is better to treat the case every day, but I have had good success with patients who could not come oftener than once a week. Do not give the patient medicine to use at home and expect to cure him; and never tell him what you are using.

In children who dread the procedure I do not attempt much the first time or two, but strive to win their confidence, which is not ordinarily difficult, as the treatment is not at all pain-

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"Our observation of the medical literature indicates that ECHINACEA is being used far more than formerly. — J. A. M. A., APRIL 8, 1905."

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ful and is always followed by a certain sense of relief, so that children who were in mortal terror of me at first will, after a few treatments, come to me of their own accord. Even babies of one and two years, who would not suffer me to touch them at first, after experiencing the grateful relief afforded, will place the head on the chair in the proper position and gladly submit to the treatment.

When the diseased ear has once been thoroughly cleansed I consider my work as half done. Thenceforth improvement is usually very rapid, even old inveterate cases yielding in a few weeks. Relapses occur, but are easily managed, and I have seldom had a second relapse. Of course, mastoid disease, necrosis, polyps, etc., must receive appropriate treatment; but I have no hesitation in saying that all simple, uncomplicated cases (which include the vast majority of all cases under one year's duration,) may be cured by this treatment if it is properly and thoroughly carried out.

Care must be taken to have the medicaments *warm* and not too hot—100 F. is about right—and to always stop up the ear with a bit of aseptic cotton before permitting the patient to leave the office. Be careful to use a piece of cotton of just the right size to securely close up the meatus; if too large it will work out, allowing the solution to escape and leaving the ear unprotected; if too small it will slip back into the canal and so fail of its effect.

Never syringe the ears in otorrhea; is is risky and useless. I usually drop a little warm solution of sodium borate—5 per cent.—in the ear to prevent a slight stinging which sometimes ensues when active steps are taken. I also dry out the canal with cotton on an applicatior, but this should be very carefully done with speculum and the canal well lighted. These points are non-essentials, merely refinements which render the treatment a trifle more pleasant, perhaps, that is about all.

The general health will probably require overhauling, indications being met as they arise. It is a good idea to regulate and anticepticise the bowels as a routine measure, using salines and intestinal antiseptics—*e.g.*, the sulphocarbolates as needed. In the South especially, malarial and other miasmatic affections will often need looking after; also any other existing disease may require attention, but it is presumed that the practician will know how to handle these.

We all ought to try to help each other; not one of us but has much to learn; and in these brief talks it is my principal aim to set an example for the rest, hoping my little crumbs

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devoted exclusively to the treatment of both organic and functional Nervous Diseases, is fully equipped with all facilities for their treatment, including hydrotherapy, massage, electricity, etc. Dr. Meyers, M.R.C.S., England, L.R.C.P., London, has confined his attention for nearly fifteen years to these diseases, after havin spent four years in Europe in their study.
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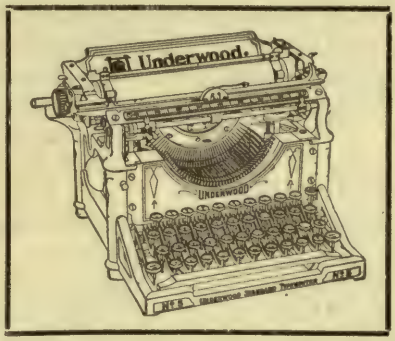

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may some day come back to me in the shape of seasonable aid from some brother who has a few pointers himself and, like me, is willing to "whack up."—*The Kansas City Medical Record, July* 1906.

The Awakening.

The whole medical profession of this country is but just waking up to the fact that it has been slumbering and dreaming for many, many years, says the *California State Journal of Medicine*. But already signs of a new activity are in evidence in many portions of our country. In many communities the best physicians will not make insurance examinations for less than $5. They are discussing the lodge practice evil and coming to realize the insult to professional intelligence in proffering a pittance for wholesale professional services. Most physicians who are not either moribund or densely ignorant are beginning to ask "impertinent" questions about the composition of the all too numerous "secret proprietary" medicines offered to them by glib-tongued "detail men." Occasionally we hear a protest against the gratuitous educational remarks of some boorish drummer who undertakes to tell physicians all about the special and particular virtues and advantages of the nostrum manufactured by his particular "house." Most of the state journals are very much awake and are working hard to try and wake the slumbering members of the profession; but, unfortunately, some are either asleep or, to judge from their advertising pages, are to be classed with the predatory privately owned journals. Doubtless the respectable element in these particular associations will prevail in time, and these few state journals will then cleanse themselves and "be good."

Meatox—Powdered Dry Beef.

Meatox is absolutely free from preservatives and it keeps for any length of time in unsealed containers.

The essential difference between Meatox and meat juice or meat extracts is that Meatox contains all the nutritive elements of beef, while liquid extracts of meat are merely stimulants.

Meatox contains from 65 to 70 per cent. of proteides and albumoses, and about 2 to 3 per cent. of common salt, 2 to 3 per cent. of gelatine, 2 to 3 per cent. of fat, 7 to 9 per cent. of water, and inert substances.

1 lb. of Meatox contains the nutritive substances of 5 to 5 1-2 pounds of fresh beef.

Meatox can be given to dyspeptic patients in its original

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oftentimes will make unnecessary

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if it be used for the application of Antiphlogistine hot and thick in the various inflammatory and congestive conditions.

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Depletes Inflamed Areas,
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powdered condition, 1-2 ounce morning, noon, 6 p.m., and 10 p.m.

It can also be administered with milk, cream, fresh butter on toast, filtered water either cold or warm, beef tea or bouillon, honey, pure malt, soft-boiled eggs or soft omelet, cereals, barley, wheat, rice, etc., cooked green vegetables.

Two ounces of Meatox being administered to a dyspeptic patient every day, in connection with the little amount of other foods of which he can partake, will supply him with all the proteides contained in 11 ounces of fresh beef. This is a little more than anyone needs to eat every twenty-four hours in order to keep up his strength.

In diabetic cases two or three ounces of meatox per twenty-four hours will supply the patient with the necessary amount of proteides without overtaxing his stomach.

Soldiers in the field can be fed with two or three ounces (per day) of Meatox in connection with cereals, rice, cooked green vegetables, etc.

Sailors can be fed with two or three ounces (per day) of Meatox either plain or mixed with cereals, etc., so that it would not be necessary to give them salt meat more than once or twice a week in connection with cereals, thus preventing scurvy, which causes so many victims in the navy.

One ton of Meatox contains as much proteides and albumoses as six to seven tons of beef, while it does not require any ice to preserve it either in transit or in stock, and it does not deteriorate with age.

As I am certain you will be interested in this new food, it will afford me great pleasure to send you a liberal supply for experimenting purposes as soon as I am ready to put it on the market.

Meatox is flavored with 1 per cent. of celery extract so as to make it palatable.

Treatment of Lupus.

At the 1906 Congress of German Scientists and Physicians (dermatological section) marked interest was awakened in the report of Veiel of the cure of a large number of patients suffering from lupus by using a ten per cent. pyrogallic acid ointment. The results shown were admitted to be in every respect superior to those secured by other methods, not excepting the Finsen and other light methods of treatment.

The one especial disadvantage of the use of pyrogallic acid ointment was stated to be the pain caused.

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Blood that is starved because it has not the capacity for absorbing oxygen; thin blood which has not been nourished; weak blood which has lost the power for replenishing waste and building new tissue. Thin blood makes a thin body. Feed the blood and you feed the body. If the blood is lacking in red corpuscles and hæmoglobin it needs rebuilding that it may be capable of performing its task of reconstruction.

SAMPLES AND LITERATURE UPON APPLICATION

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PEPTO-MANGAN ("GUDE") is ready for quick absorption and rapid infusion into the circulating fluid and is consequently of marked and certain value in all forms of

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Holmes and Semmelweis.

It would appear as if the tardy honor received by Oliver Wendell Holmes on account of his discoveries regarding puerperal fever is likely in some degree to diminish the fame of Semmelweis. It is natural, therefore, that a countryman of the latter, Dr. Györy, of Buda-Pesth, should think it right to distinguish between the works of these two great men. He points out, without in any way diminishing the merits of Holmes, that the discoveries of Semmelweis were not merely in advance of the views of Holmes, but were in a certain way opposed to them. Holmes fought for the position that puerperal fever is a contagious disease; Semmelweis proved that puerperal fever and pyæmia are essentially the same process, or, to put it in modern phraseology, that puerperal fever is a form of sepsis. We know now that both were right, though we do not, with the stricter contagionists, regard puerperal fever as specific. In Semmelweis' time, however, the gap between the two views was a wide one, and Semmelweis devoted much of his later writing to combating the contagionist view. It is a psychological fault that the public is in the habit of tagging to any great advance in science some one name, forgetting that discoveries are rarely sudden or the work of one man. It does not take any of the honor from Lister that he was preceded by Pasteur. Neither is Semmelweis' merit the less in completing the edifice of which Holmes had laid the foundation, and of which, long before Holmes, Gordon of Aberdeen had mapped out the lines.—*Medical Press.*

Agaricin in Night-Sweets.

A young man who had come from Arkansas to this healthy climate to try to recover from an attack of phthisis pulmonalis, his brother having died from the same disease a few years before, sought treatment for night-sweats. Following a course of the mild chloride of mercury, I prescribed aromatic sulphuric acid and agaricin, the former to be taken three times a day, the latter at bedtime in ascending doses if necessary. It was not required in larger doses than two granules of 1-67 of a grain.

The advantages of active-principle therapy are the purity of the drug, the singleness of its elemental content, the ease with which combinations can be made, and the great variety which can be easily carried into neighborhood practice.—*Neal, American Journal of Clinical Medicine.*

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BRISTOL-MYERS CO., Brooklyn, New York.

The Handbook and Souvenir of Canada, printed for the British Medical Association, was one of the most creditable productions ever seen on a medical occasion. This souvenir bespeaks for the Torontonians a very high standard in the "Art Preservative of Arts," and is well worth a description. The type was 11-point Scotch face, with boxed side notes, and printed on "Old Stratford" deckle-edge paper, with marginal ilustrations in buff and gray tints, displaying the coats-of-arms of the various Provinces of the Dominion, together with well-known public buildings and floral designs. The buff tint half-tone illustrations covered sixteen pages of 100-pound double-demy coated paper, showing various places of interest throughout Canada from the Atlantic to the Pacific, views of cities, public buildings, attractive scenery, etc. The title-page was printed in black with a three-color border design and intertwining of the rose, thistle and shamrock, with the Canadian beaver as a set-piece at the foot of the page. The book was bound in a buff-tinted Bristol board, overhanging, and with pergamine jacket, tied with buff cord. The design was printed in gold and three colors of ink, showing the coat-of-arms of Toronto and also of the Dominion. The centre was embellished with a portrait of Sir Charles Hastings, the founder of the British Medical Association, draped on either side with the British and Canadian jacks, with a wreath of maple leaves and the Canadian beaver beneath. This production bore the modest imprint of "William Briggs, Toronto." The handsome volume, aside from its art features, will prove a worthy piece of enterprise in tastefully setting forth the physical and other features of the "Keystone Colony of the Empire."—*Medical Review of Reviews, New York.*

A trite aphorism runs thus: "A wise man doesn't attempt to preserve his wisdom in alcohol." It is a sad thing that many a doctor tries to do that which the wise man rejects.

Physicans desiring to dispose of their practices will secure an easy way of doing so with a minium amount of publicity, by taking advantage of the Canadian Medical Exchange, conducted by Dr. W. E. Hamill, 75 Yonge St. He has been conducting this important department of medical affairs for twelve years and the great majority of medical sales have past through his hands during that time to the entire satisfaction of vendor and vendee. A partial list of his offers will be found among our advertising columns in each issue of this journal, the complexion of which, of course, changes from month to month.

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